FOUNDRY
EST. 1902 TRADE JOURNAL
WITH WHICH IS INCORPORATED THE IRON AND STEEL TRADES JOURNAL
VOL. III
No. 2345
NOVEMBER 16, 1961
Registered at the G.P.O. as a Newspaper
Offices: John Adam House, John Adam St., London, W.C.2
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Standing up to it

his pattern was made in Araldite casting resin because the wood patterns previously used uld not withstand constant use on moulding machines. It is a pattern for a fifth wheel steel sting required by Scammell Lorries Limited, and was made at the Leyland Motors Limited eel foundry at Farington. Araldite casting resins permit the speedy and economical production any number of replica patterns, enabling the master pattern to be preserved. These plicates are exact to size, as there is no shrinkage during setting, and no allowance for 'double duction' is necessary. The patterns are tough, durable and not easily damaged, and do not eteriorate in store. Furthermore, modifications can easily be made, using the same materials are used in making. May we send you details of 'Araldite' epoxy resins for foundry patterns?

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for producing patterns, models, jigs and tools
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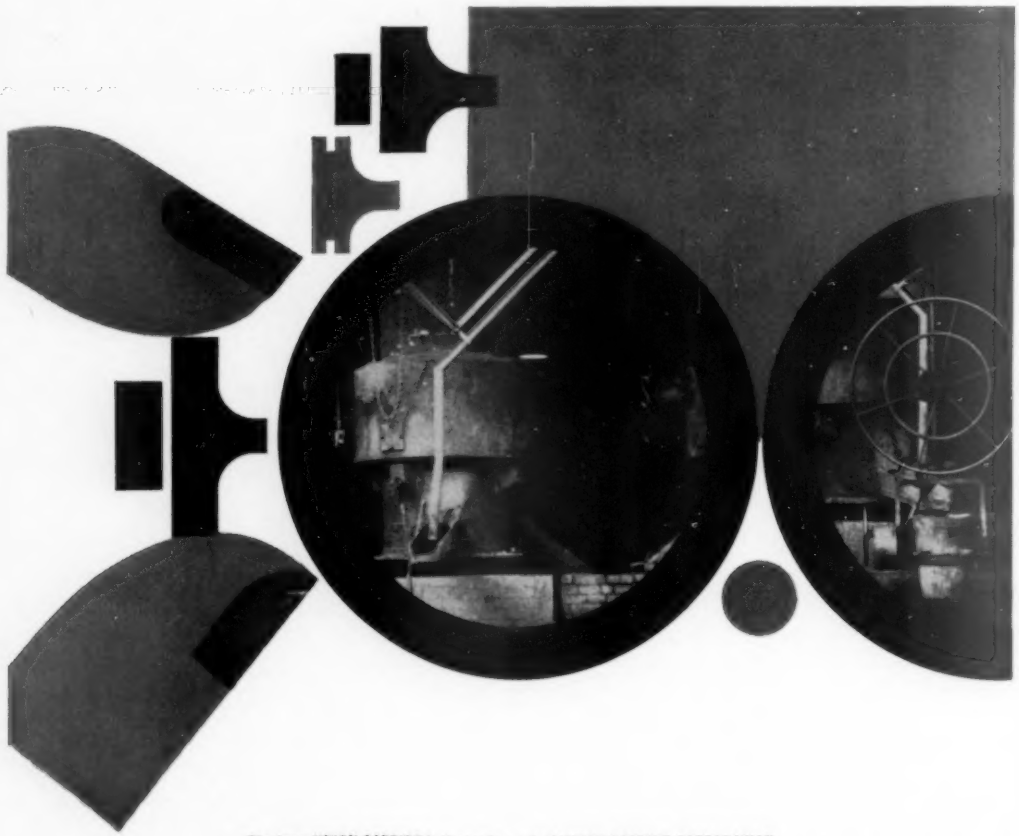

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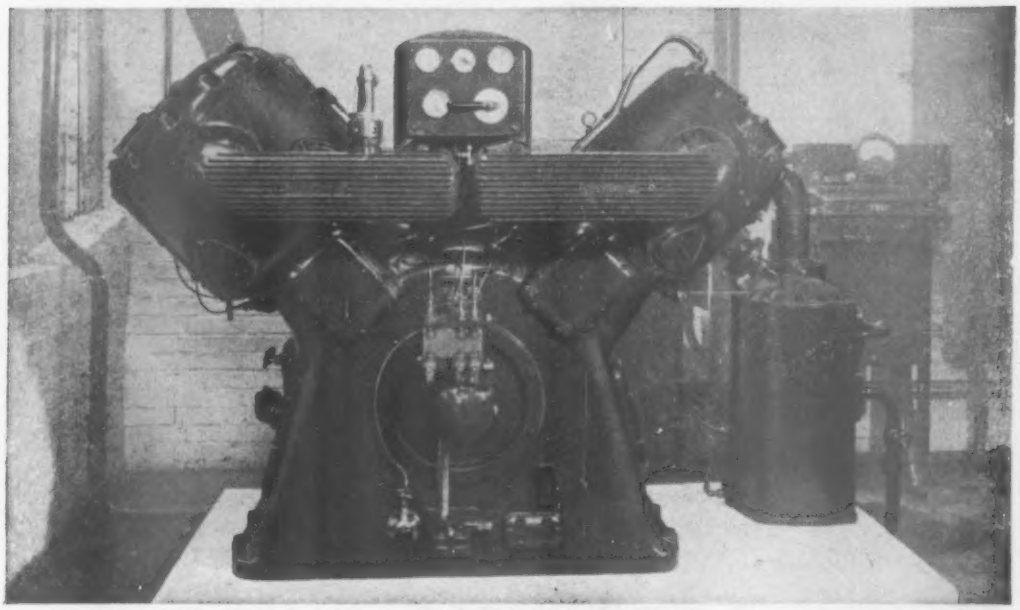

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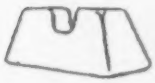
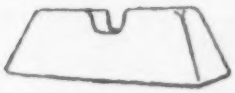


Ingots by Road . . .



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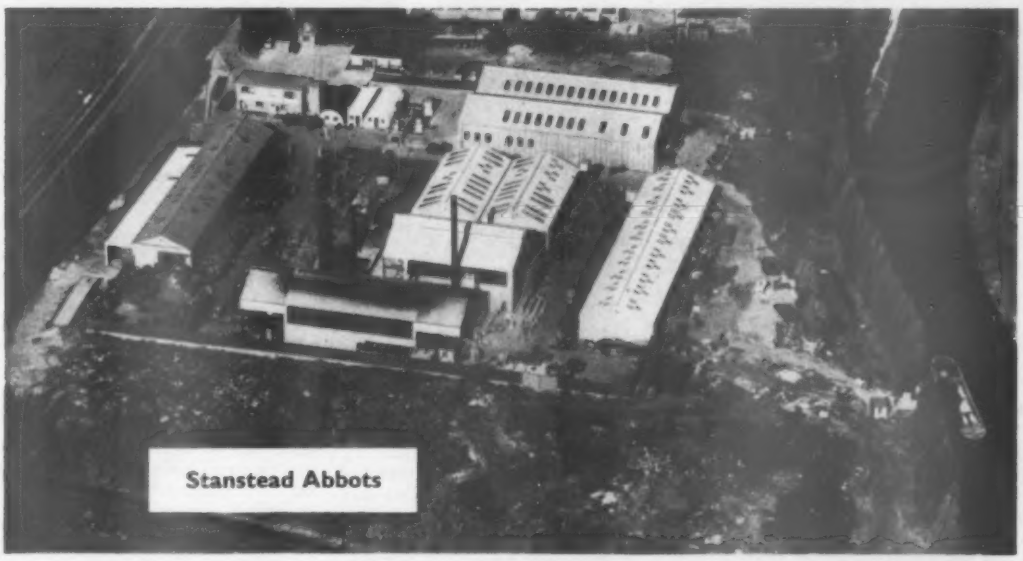

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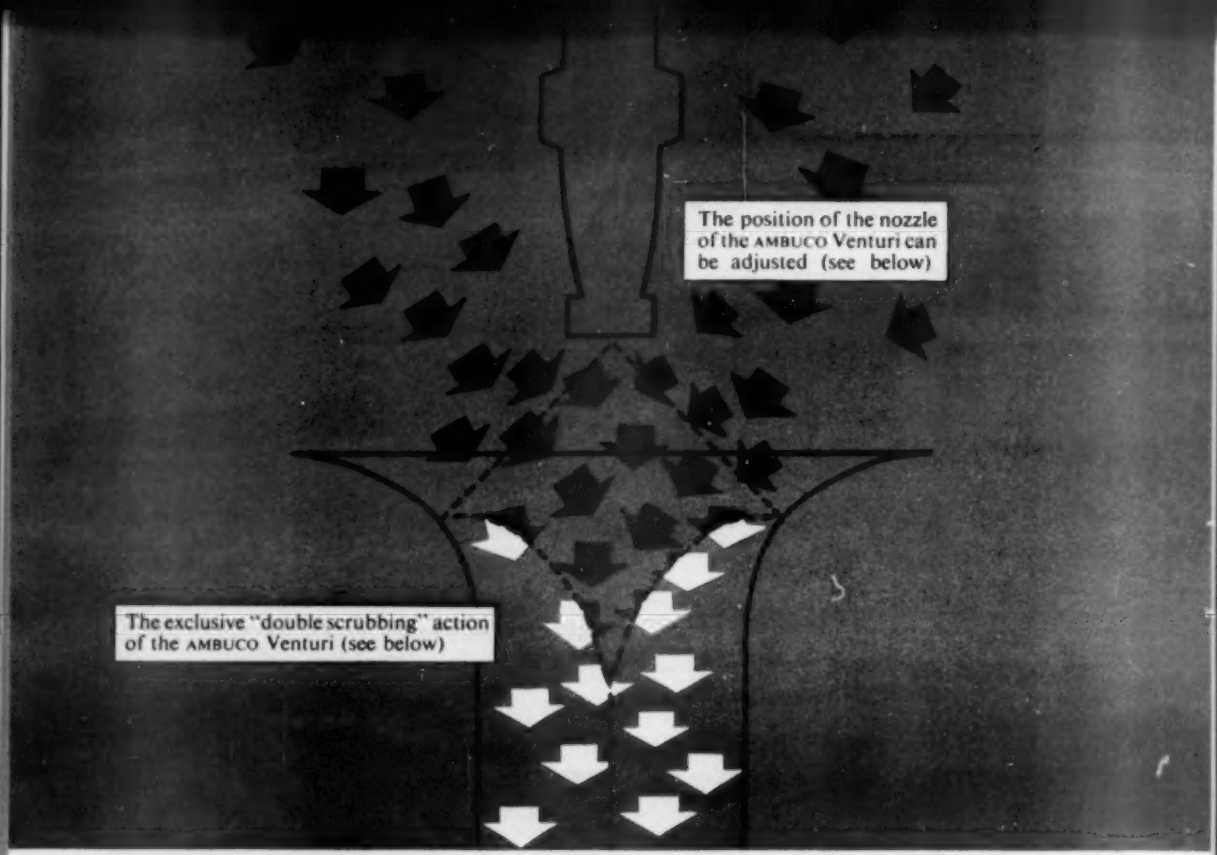
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The exclusive "double scrubbing" action of the AMBUCO Venturi (see below)

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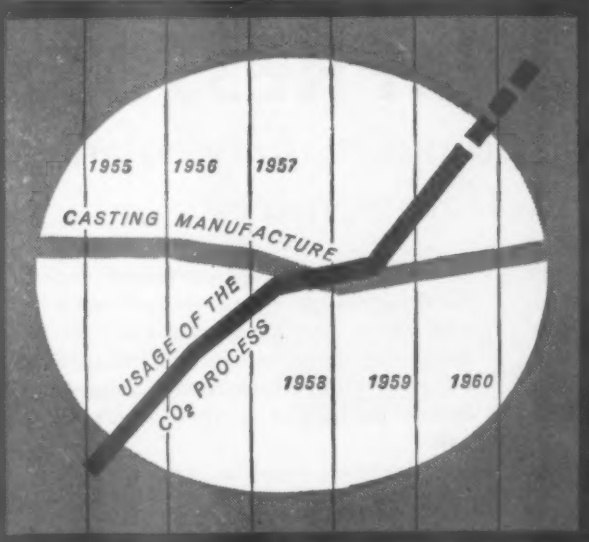
HARD AND FAST FACTS

why casting by the CO_2 process has increased sixfold in five years



The steep rise of the graph proves it—the number of castings produced by the CO_2/sodium silicate process has multiplied six times in five years. Here—hard and fast—are the facts why:

1

Simplicity—One unit sand is used throughout for all sizes of cores and moulds, cutting out complex sand mixing and testing. Sand bonding by CO_2 gassing is simpler, quicker, cleaner and surer and eliminates stove drying.

2

Economy—Savings in materials, fuel, equipment, maintenance and handling costs are substantial and the work content of cores and moulds greatly reduced.

3

Productivity—Casting yields have been doubled with the same floor space. Fewer moulding boxes are needed and turn-round is stepped up. Production becomes flexible, while less fumes and dust improve working conditions.

4

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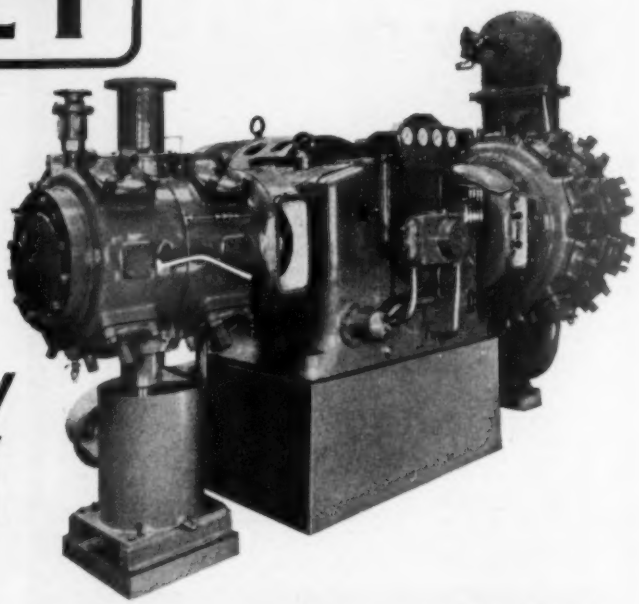

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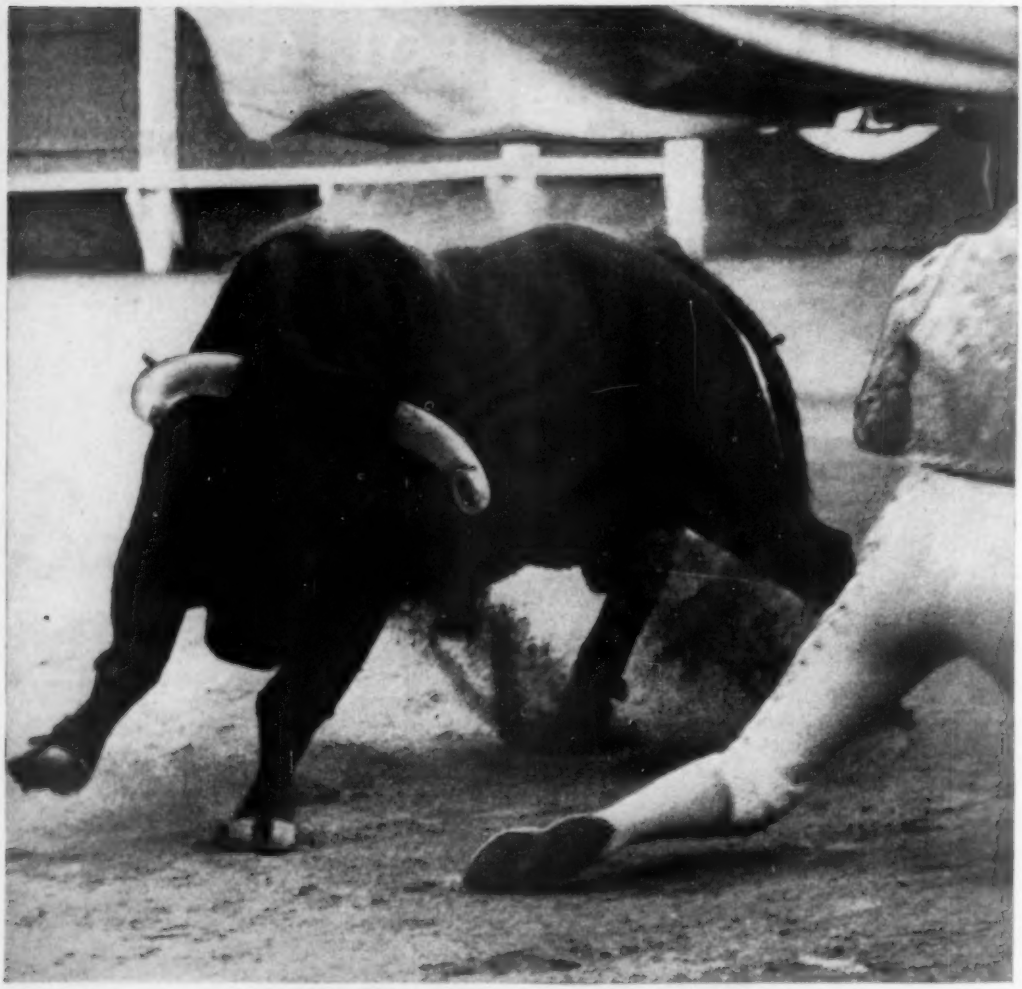

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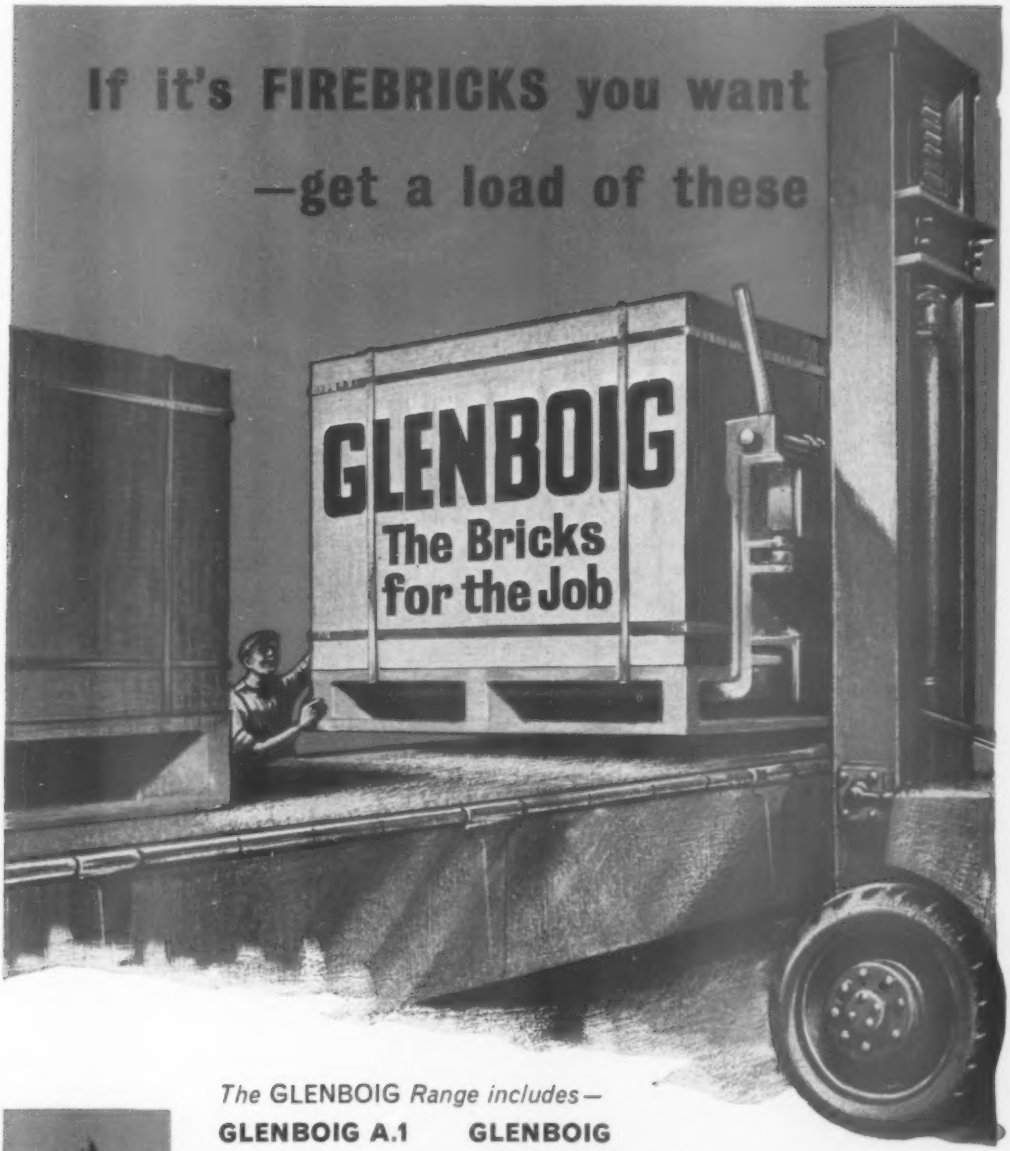

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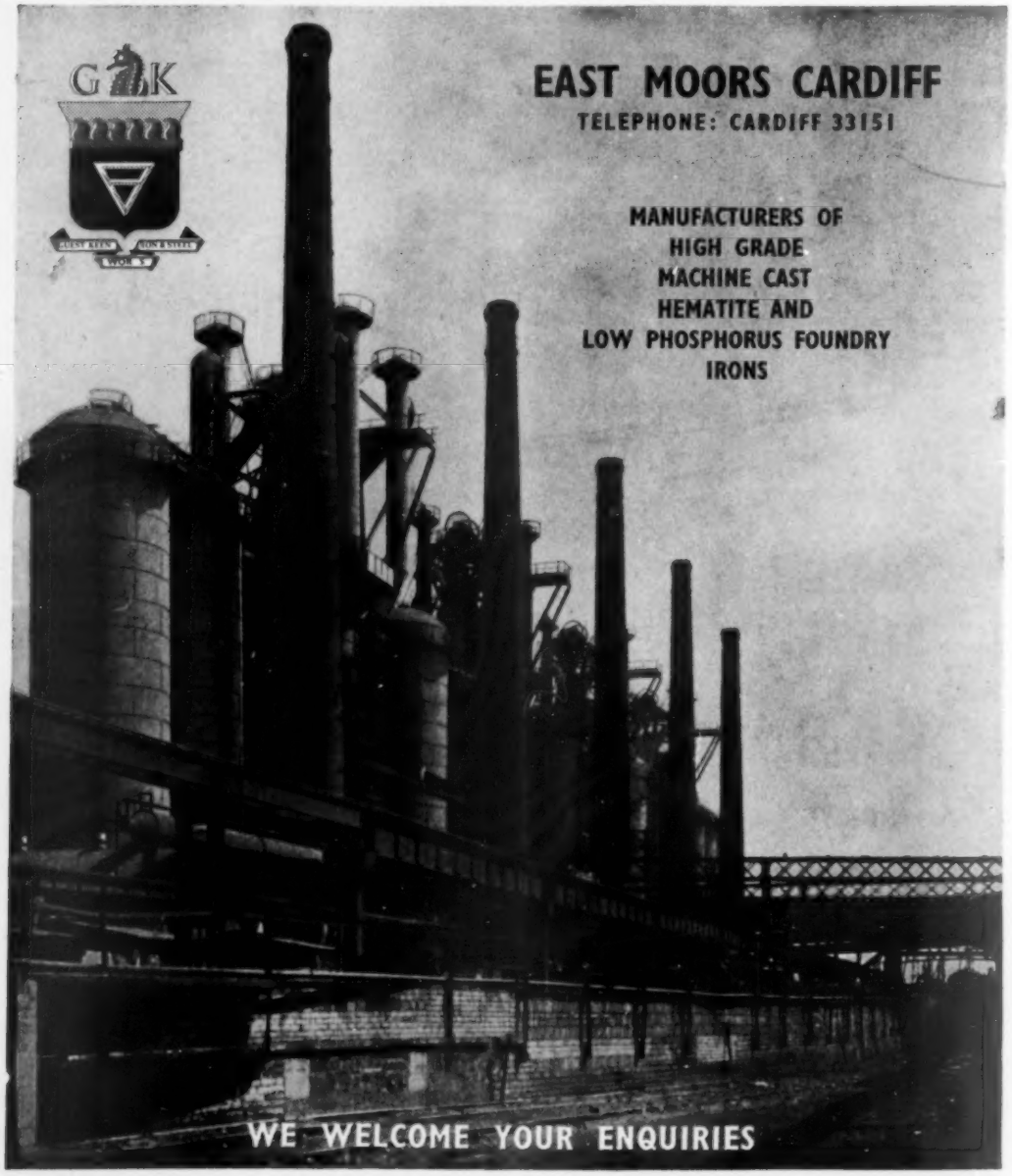

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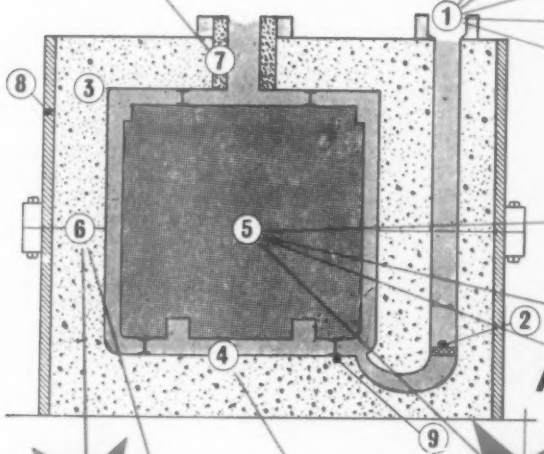

Key to Sectional Drawing of Mould

		Send for booklet No.
1	Metallurgical Control use of Fluxes	3
2	Clean Metal by using Ceramic Strainer Cores and Discs.	4
3	Coal Dust additional to Facing and Backing Sand	1
4	Silverskin Blackings, Plumbago and Mould Dressings.	1
5	Cores using Crulin and Crudol Core Binders (Oil Bonded, Air Setting Cereal or CO.2 Binders).	2
6	Moulds Parted with Beecro Silica Free Parting Powder or Beecrol Parting Liquid.	1
7	Casting Feeding with Alsica Exothermic Feeder Heads.	4
8	Moulding Boxes supplied by B.F.U. Chaplets, Studs, etc.	5

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TENSILE				TRANSVERSE			
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	in.	sq. in.	tons/sq. in.	in.	in.	lb	tons/sq. in.
ade 20	0·399	0·125	22·0	0·6	9	725	34·4
	564						33·2
	·79						1·9

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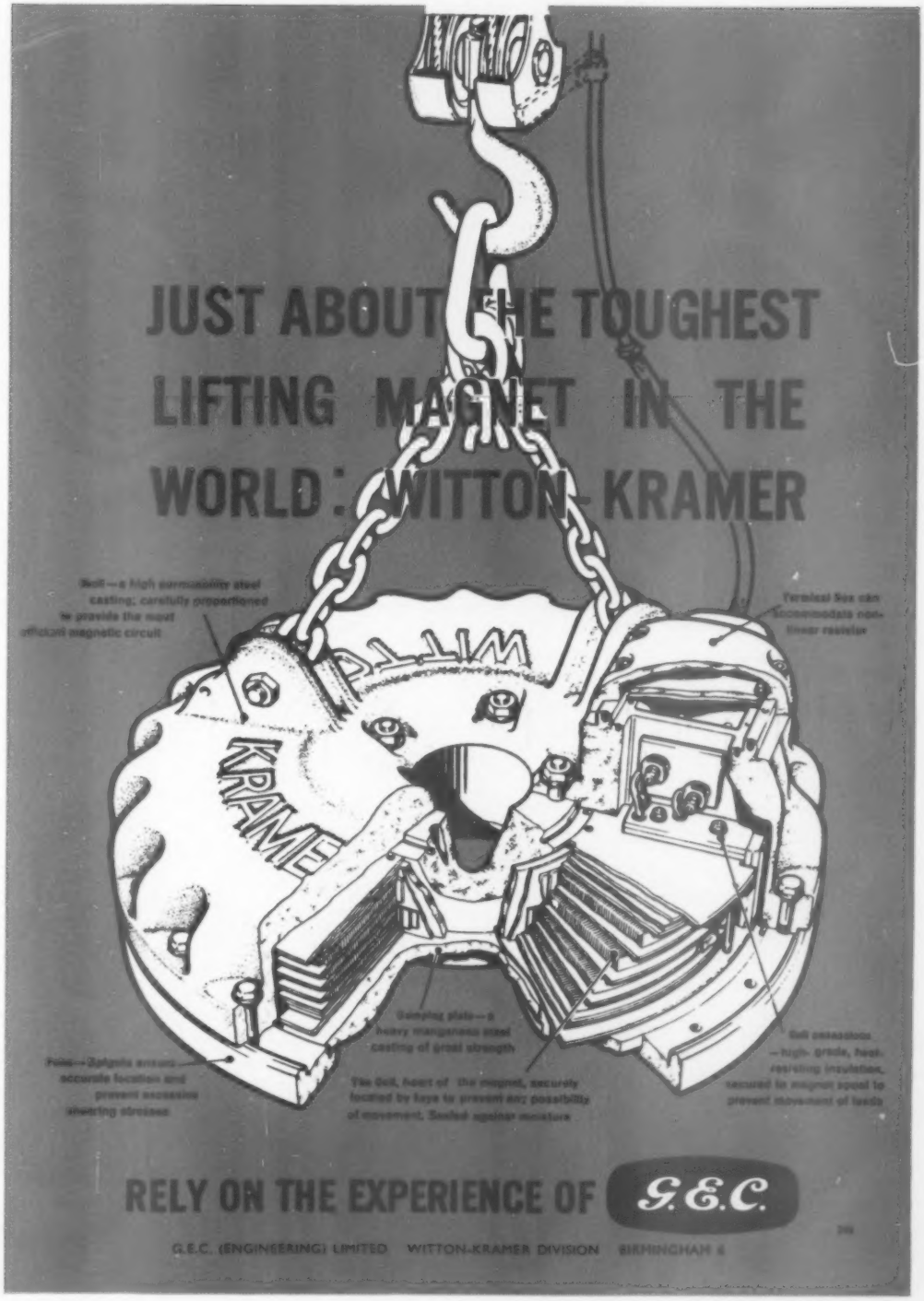
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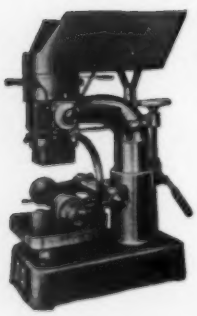

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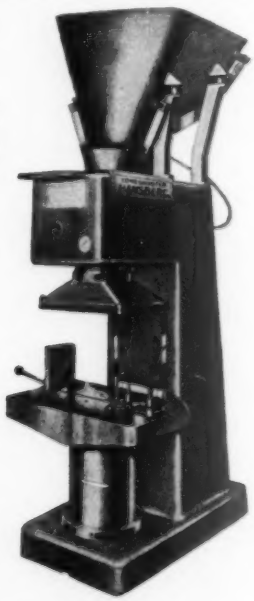

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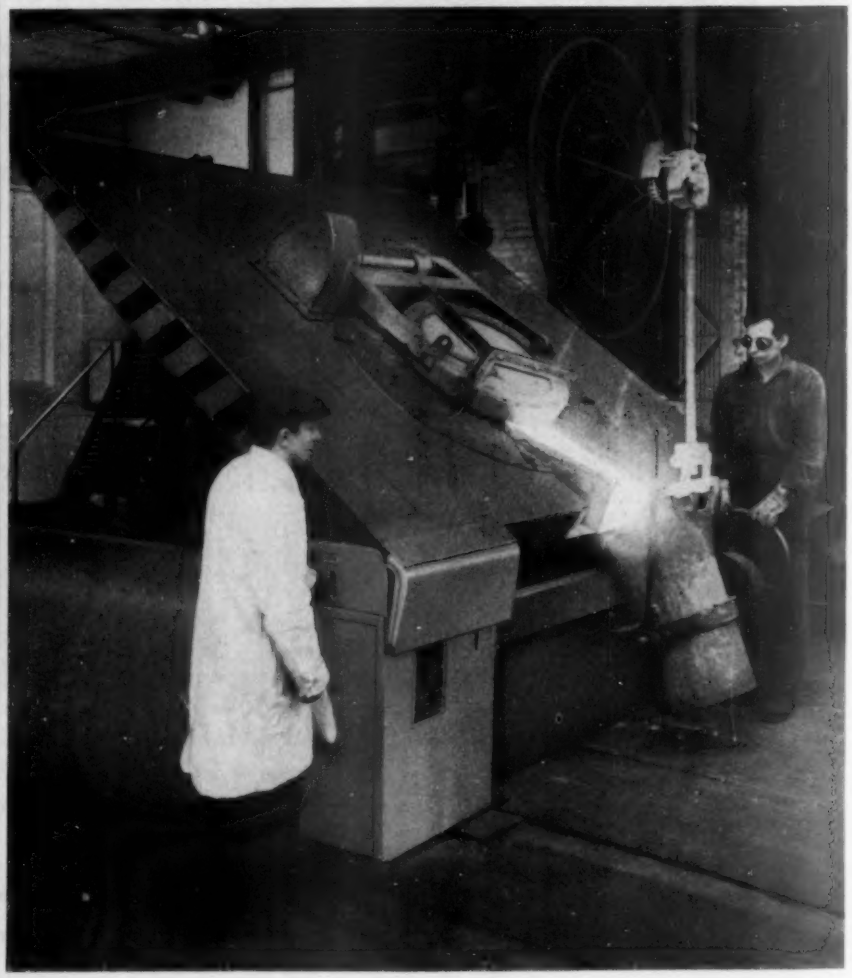

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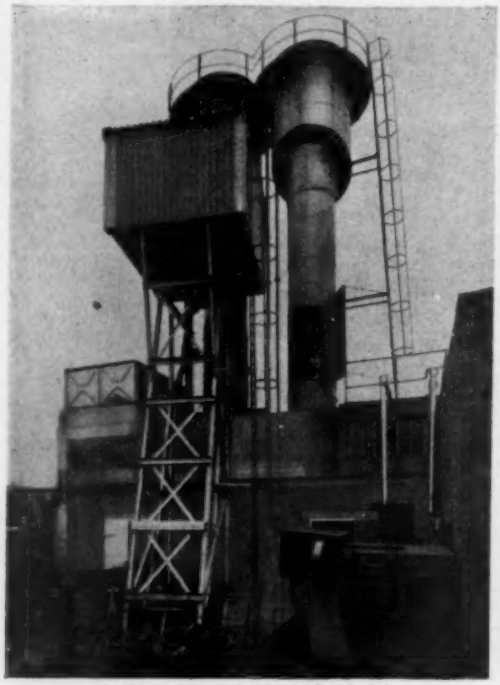

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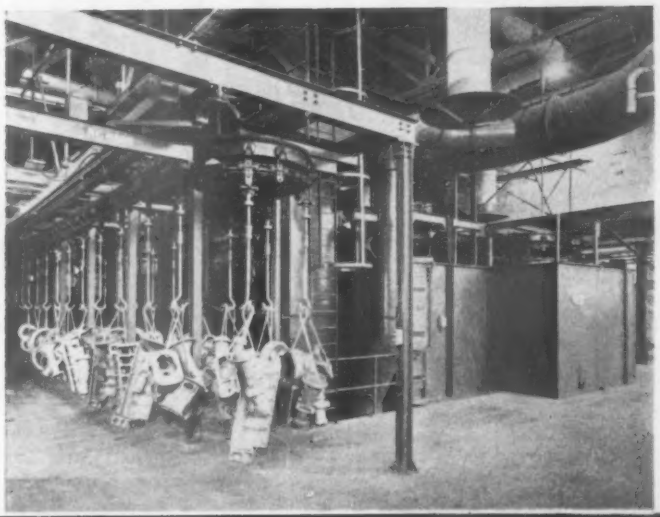

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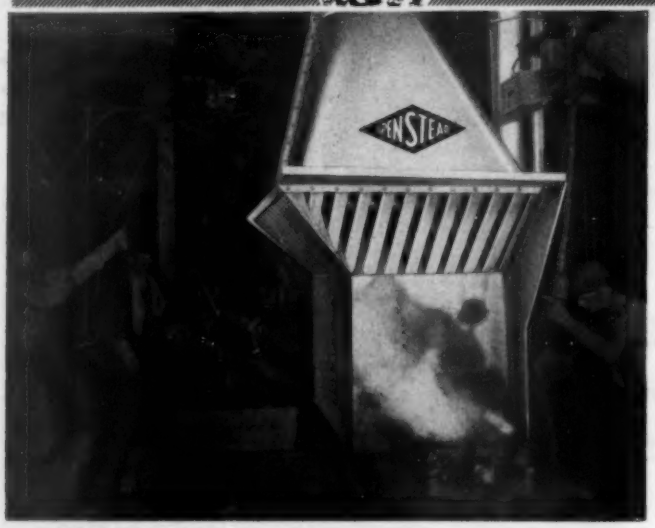

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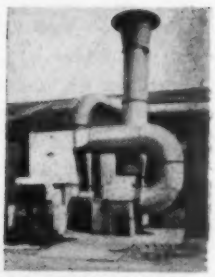

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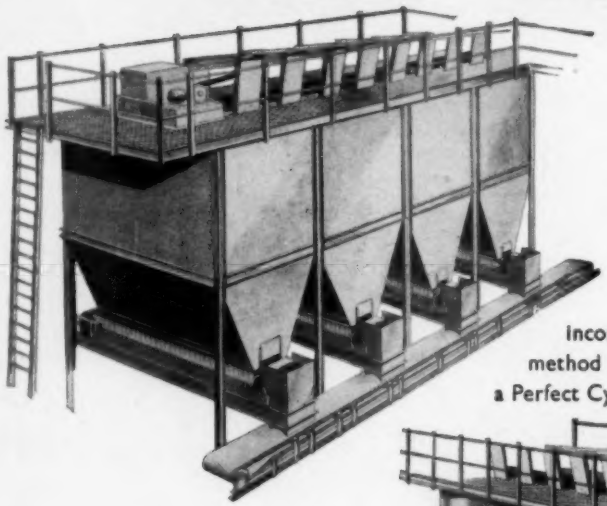

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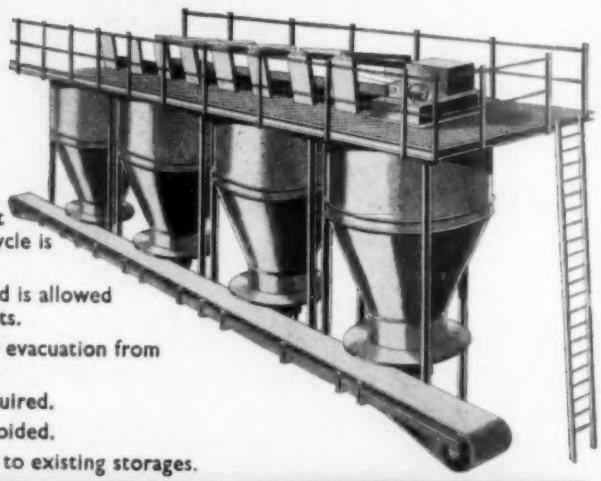

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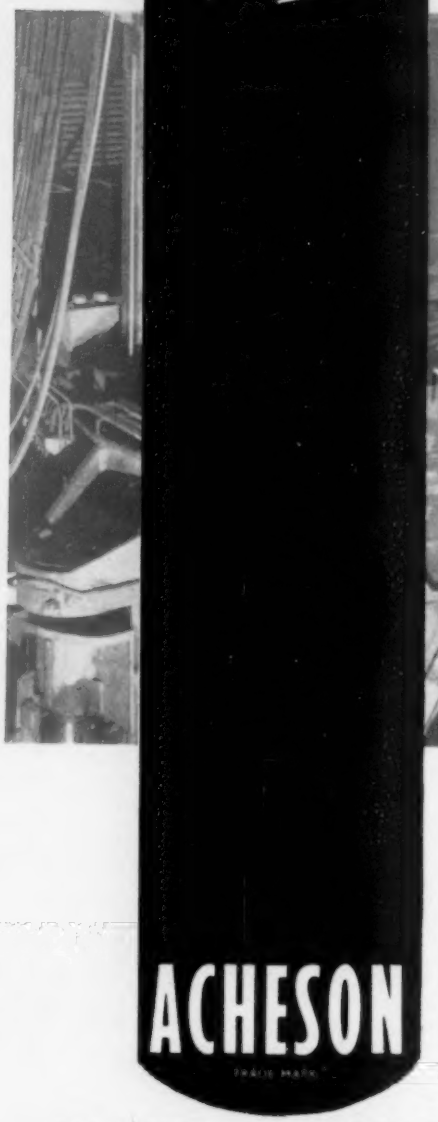

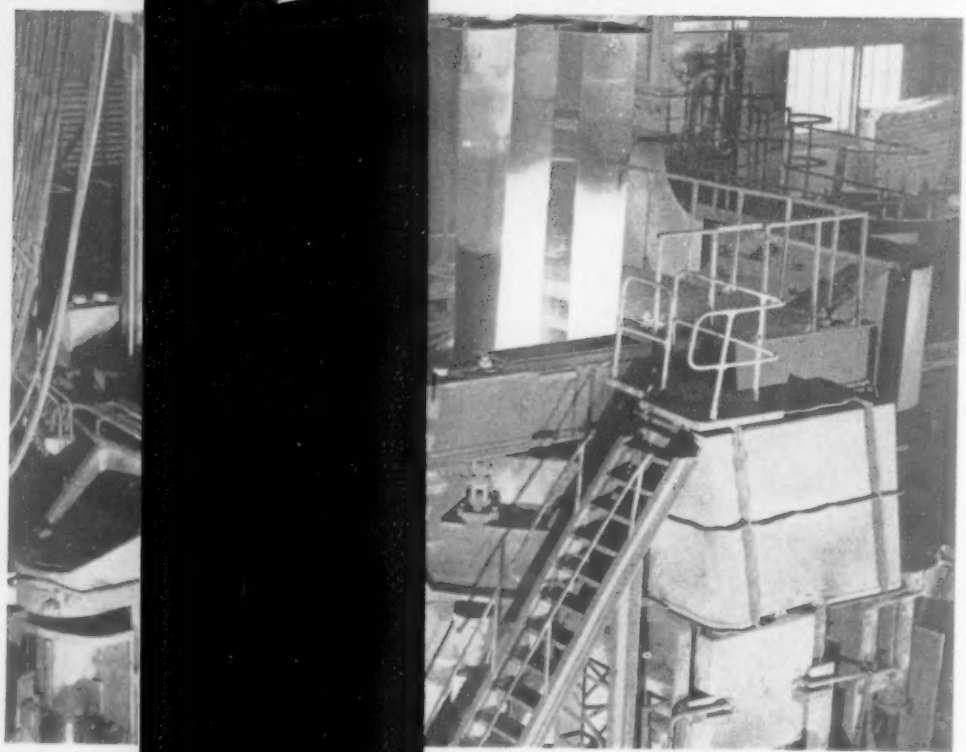

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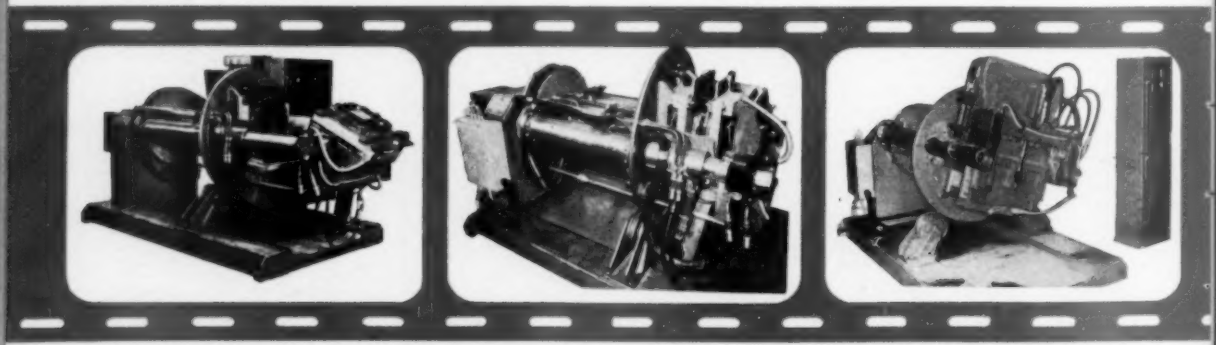

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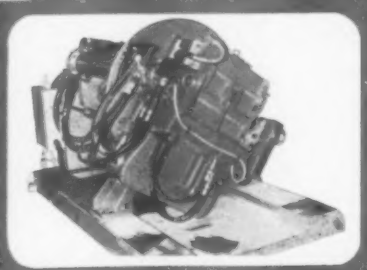

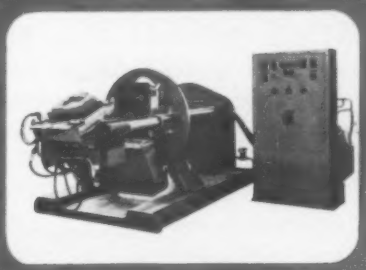

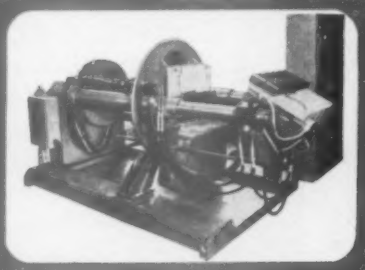

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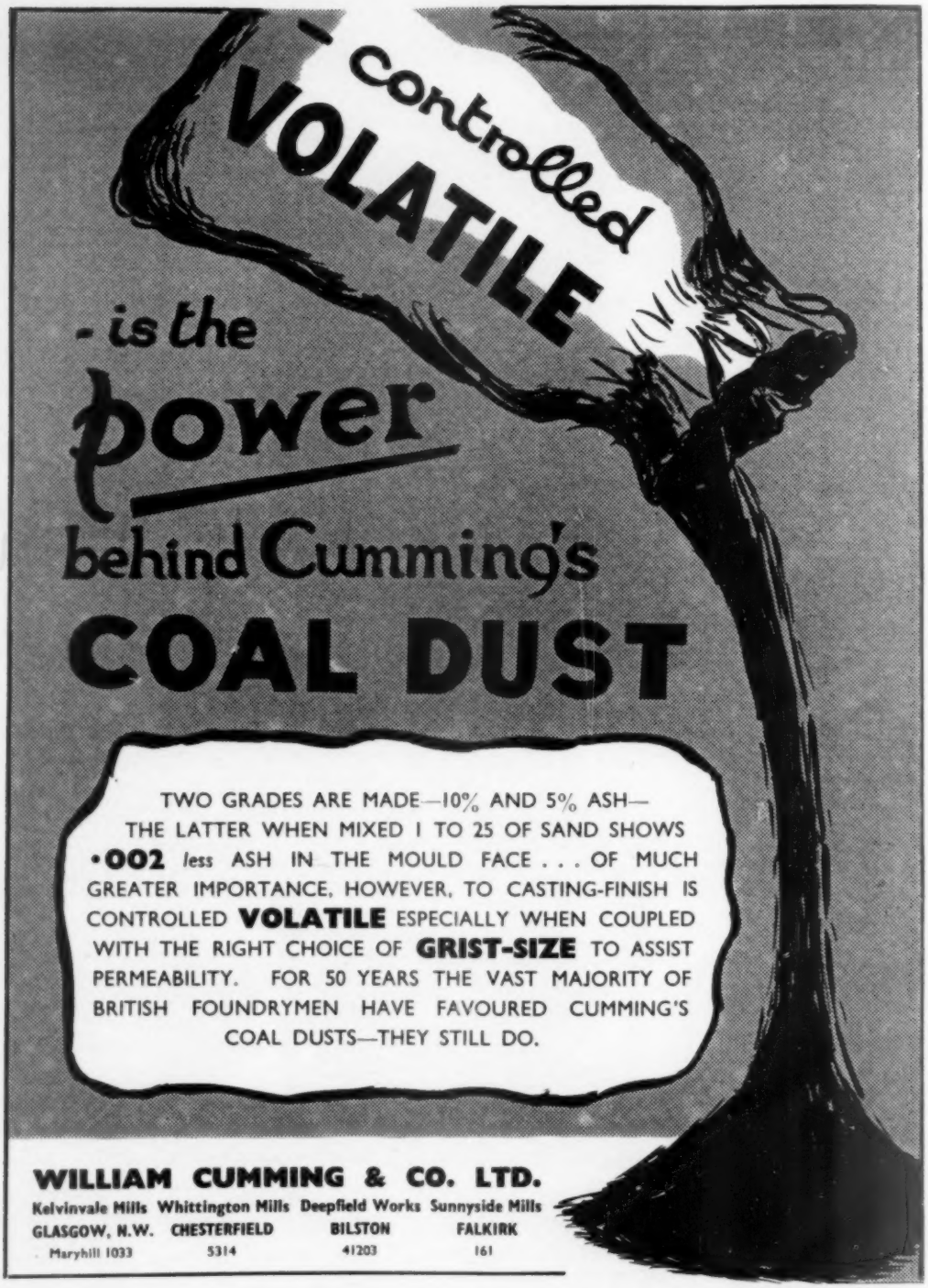
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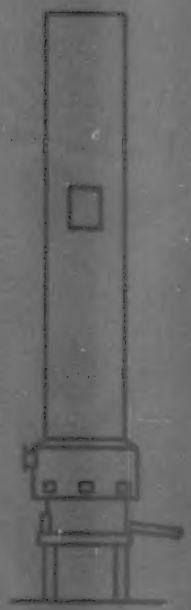

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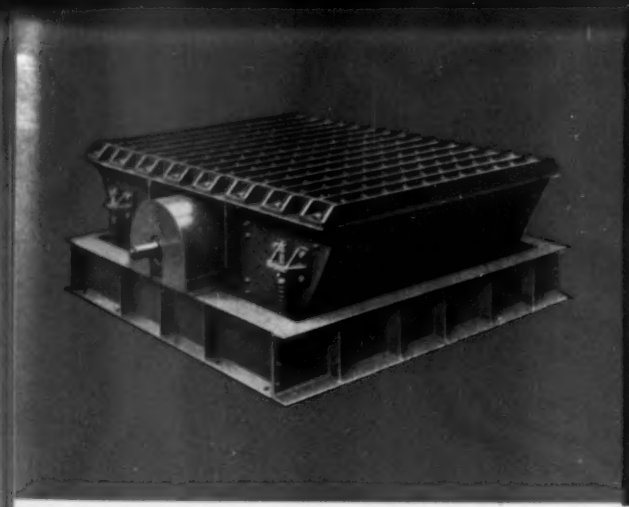

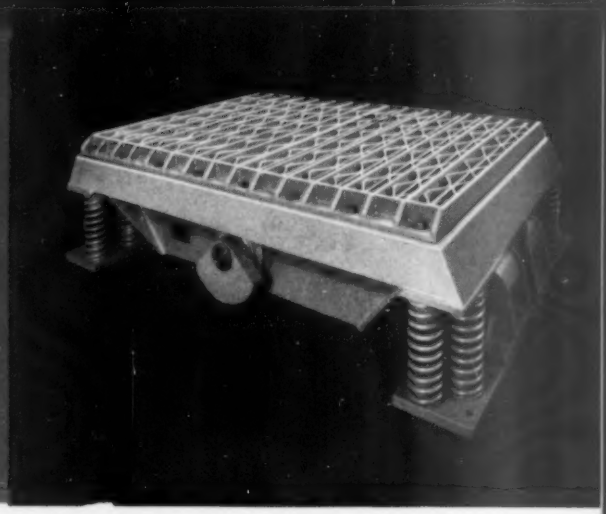

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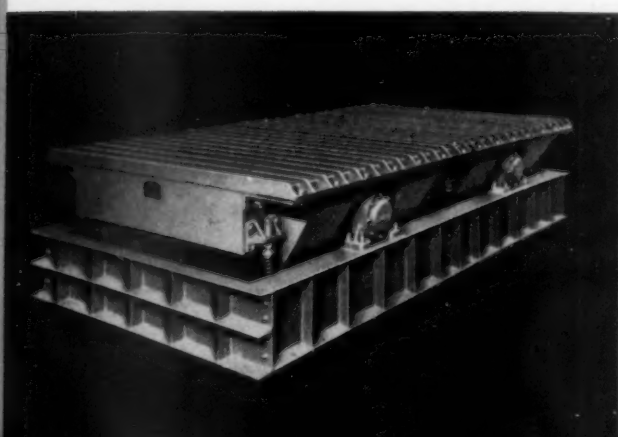

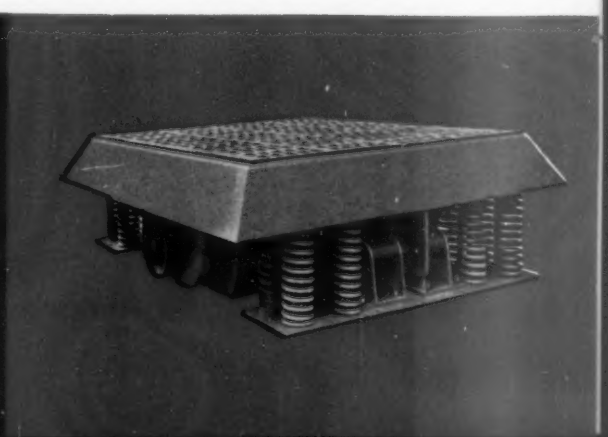

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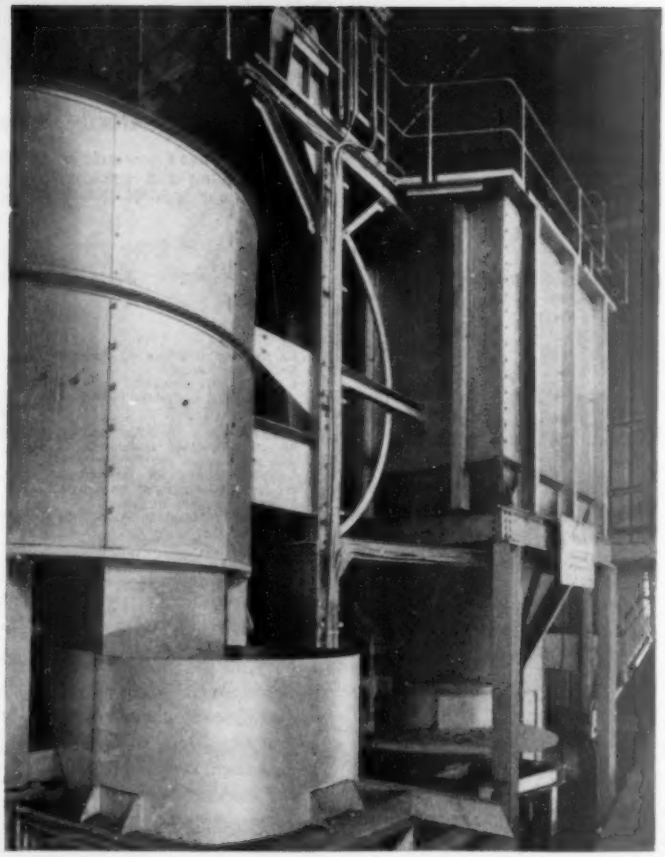

Here's an example

Photograph shows:

Large storage hopper with rotary table feeding new sand to a bucket loader, which in turn, charges a 3F size Mix-Muller — batch capacity 4,000 lbs.

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FOUNDRY
TRADE JOURNAL
Vol. 111 November 16, 1961 No. 2345

What Buyers Want

Recently, an effort was made at a foundry technical meeting to ascertain just what were the primary requirements of buyers of castings. Thus, a panel was organized, consisting of a purchasing officer, a managing director of an engineering concern, the head of a design office and a foundry works manager. A cordial desire to co-operate was generally evinced and as the major requirements on both sides were not too onerous, such co-operation should not prove too difficult. It was found that the major requirements of the foundry industry's customers could be summarized as: First and foremost, that delivery dates should be honoured. It was also held that foundry representatives should be qualified in order to help in the solution of customers' problems; that practical dimensional tolerances of castings should be agreed upon and adhered to; if pressure-tightness were required, then—to state the obvious—the castings should be pressure-tight, a dictum which was said to apply with greater force to the non-ferrous side of the industry. It was learned that the customer members of the panel would welcome the regular supply to their designers of data regarding the physical and mechanical properties of cast products, and finally, that founders should pay greater attention to casting finish when the casting was on view in the finished product.

Founders at the meeting wanted to sell their goods by the piece instead of by weight—for obvious reasons—and, strangely, this proposal seemed quite acceptable to their customers. Other needs of founders included the supply of patterns of better quality generally. Many engineers seemed to forget that the finished casting would reproduce any defects inherent in patterns, both of surface or dimensions. It was made clear to the customer interests represented that the design of a casting must be such that not only is it mouldable, but of such a form that it could be manufactured at low cost. Skilled moulders can produce castings from practically any pattern—as in the case of art founding—but at a cost often not justified in the general run of business.

Probably the second most important of the wishes expressed by the buyers' panel was that highly-trained technical salesmen should keep in contact and deal with their out-of-the-ordinary enquiries. Purchasing officers should remember that a man deserves a proper reception at their works and should not be summarily dismissed with a stereotyped refusal to accord an interview. A final query was raised at the meeting as to whether or not there are too many foundries. The answer is simple; foundries cater for a variety of trades and industries and thus there are textile engineering foundries, stove-grate, ingot-mould, propeller, automobile-component makers and, of course, the jobbing shops—to list but a few types. The query can be related to rapidity of despatch on one hand or delivery delays on the other, as throughout the ages, some foundries have been overloaded and some slack. By and large, it is not so much that there are too many foundries, but that here and there one can detect out-of-balance production. However, one thing is certain, namely that founders who can meet the conditions stipulated by the buyers can be assured that their shops will continue working to capacity.

Correspondence

To the Editor of the FOUNDRY TRADE JOURNAL

MOULD DRYING

SIR,— I had the pleasure of attending the recent conference of the British Steel Castings Research Association at Harrogate and was keenly interested in the various papers presented at this meeting. The paper on the design and operation of mould-drying equipment was of particular interest, and my principal regret was the rather abrupt termination of question time. I had hoped to make some remarks on personal experiences.

The statement of one member of the audience that stoves "were dirty, inefficient and obsolete" is both misleading and untrue. The modern foundry stove, properly designed and used, is both efficient and clean, a fact that is rapidly becoming more apparent as coal- and coke-heated stoves are replaced by those using gas, oil and electrical heating. The most important development in this type of stove has been the adoption of recirculation—whereby the gaseous content of the drying chamber is changed several times per minute—and has resulted in spectacular improvements in drying quality, reduced drying times and lower fuel consumption.

Tests carried out by a National Fuel Efficiency Service on British-made stoves, both in iron and steel foundries, have shown that a ton of moulds can be dried consistently and completely for an oil consumption of only 2.6 gall. and in the case of gas firing 4.4 therms. It should be mentioned that these tests were arranged by the founders themselves.

Efficiency Pointers

When the author said "the most efficient stove, was a full stove" he hit the nail squarely on the head, far too many stoves are operated only half loaded, with the result that a great deal of fuel is expended in heating empty space. Another important aspect of stove operation, which is often neglected, is consideration of the type of operator put in charge of the equipment. Present-day stoves are fitted with automatic controls which have dispensed with the hard and laborious work inseparable from old-fashioned stoves, but all too often the man who looked after the old stoves is put in charge of the latest equipment, sometimes with regrettable results. It is essential that a stove operator should have some mechanical knowledge and skill, both for the sake of the equipment and to obtain the best results.

There is, in this country, a highly skilled body of engineers who specialize in foundry drying equipment, and who can supply all the needs of the industry without recourse to overseas manufacturers, as is readily proved by the very healthy export trade which is done from here. All that is asked for, is guidance from the foundry industry as to its requirements. It is far better for all concerned, if the customer will say what he wants, rather than for the manufacturer to say what he should have.

This also applies to portable mould dryers, of which a wide variety is available in the UK. One firm alone makes no fewer than seven different kinds, ranging from small units that can be wheeled about the foundry, to large dryers weighing 30 cwt., and covering oil, gas and electrical heating; with temperature ranges from 200 to 800 deg. C., and hot-air discharge of up to 1,000 cu. ft. per min.

The Conference was unique, inasmuch as it was the first time that manufacturers of foundry equipment had been invited to take part; there is no doubt that the innovation was an outstanding success, and the British Steel Castings Research Association is to be congratulated on this venture. Close co-operation between users and manufacturers of any type of equipment, can only result in mutual benefits to both sides and more rapid development of new techniques —Yours, etc.

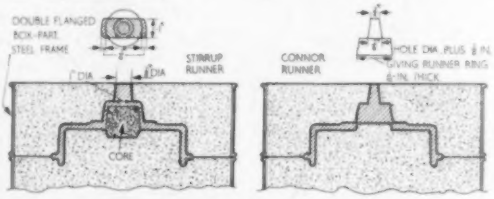
"STOVE BUILDER"

(*Name and address supplied*—EDITOR)

To the Editor of the FOUNDRY TRADE JOURNAL

BRAKE-DRUM PROBLEM

SIR,—Replying to "Drummer's" brake-drum query (JOURNAL, September 21), it is not always easy to make drastic alterations to equipment or methods, but as a preliminary shot, I would suggest moving the runner system, which is at present creating "hot spots," and inviting porosity. Runners as shown in these two sketches, ought not to give scabbing trouble, especially the stirrup type; both will be found to break off cleanly and easily.



If some scabbing does occur, an adjustment to the machine jolts should cure it, and possibly still not affect porosity, when the runner is no longer located in the trouble area.

No apologies are made for using words such as "possibly," "preliminary," and "suggest," as experience has instilled caution in so many cases.

F. C. BASELOW.

Ipswich.

Correspondence on this subject is now closed. It is clear from the replies received that "there are many ways of killing a cat. . . ." The original inquirer has expressed gratitude and stated that the information received has given him ample data for remedying the defect as well as several useful tips for future practice with this and other jobs.—EDITOR.

NSMP "Family Weekend"

The National Society of Master Patternmakers have made tentative arrangements for a "Family Weekend." It is suggested that the first event of the gathering should be a visit to the Ice Show, "The Wizard of Oz," at Wembley, on the afternoon of Saturday, January 13, 1962, at 2 p.m. It is proposed that the whole party should stay at the Cumberland Hotel, London, and return thereto for participation in the Society's dinner and dance that evening, and a block booking has provisionally been reserved. The culmination of the weekend will be a tour of London by motor-coach on the Sunday morning. Any master patternmaker who is interested in participating with his family should write to the secretaries, Fisher and Firkins, 12, Cherry Street, Birmingham, 2, for final details.

FAIRBAIRN LAWSON COMBE BARBOUR, LIMITED—Mr. D. M. Blackwell has been co-opted as an additional director.

Largest Pattern Shop in Europe?

Layout and Operational Methods at Pressed Steel Company, Limited.

A chance remark at the annual dinner of the National Society of Master Patternmakers that the largest and best-equipped wood pattern-shop in Europe was situated in Oxfordshire led the writer to make further enquiries. It transpired that this somewhat sweeping assessment was applied to the patternshops of the Pressed Steel Company, Limited, at Cowley, Oxford. The writer visited these shops in Oxford last month, and what follows is a general account of the layout, production set-up, materials used and processes operated. From personal experience, the original claim would certainly appear to be justified.

On arrival at the works of the Pressed Steel Company, Limited, at Cowley, on the outskirts of Oxford, to inspect the firm's patternmaking facilities, the writer was conducted directly to the main buildings and entered a well-lit and lofty shop. It was so long (350 ft.) that the far end was scarcely visible, and so wide (66 ft.) as to permit two parallel production lines. Here, an introduction was made to Mr. S. O. Jones, patternshop superintendent, who afterwards conducted the tour and supplied relevant information.

Layout

Some idea of the layout is shown from Figs. 1 and 2 which are general views looking from the south end towards the superintendent's office on the left and from a point beyond that office, respectively. The second illustration (Fig. 2) particularly reveals the general arrangement, which follows the whole length of the shop, namely, the siting of patternmaking machinery of various types at the centre, abutting on to columns. Here, services—such as electricity, compressed-air, dust extraction, etc.—are conveniently arranged. Individual work-benches are arranged along each of the two long walls and in between, placed crosswise in two banks, are no fewer than 40 cast-iron surface-plates of which the 15 largest are 15 by 8 ft. in size. These are arranged at convenient heights for the various types of jobs undertaken in the patternshop (practically all automobile-body die-work). In many cases, the plates are mounted on brick plinths to confer permanence and rigidity. All pattern-assembly work is carried out on these plates, which are served by overhead monorail hoists of ½- and 1-ton capacity, with appropriate cross-connections to permit of transfer of patterns and materials from one part of the shop to another.

The shop is 16-ft. high to eaves and 29 ft. to the apex. It is now five years' old, but still looks as new, the colour scheme of egg-blue-painted machinery contrasting well with white walls and ceiling and aluminium steelwork, to give a light appearance, contributed to also by the clean and orderly methods of working practised by the 170 patternmakers therein employed. Heating is by overhead hot-air radiators and the roof—of the north-light glazed type—is heat-insulated where possible. During daylight hours, the large area of roofing glass provides adequate illumination, artificial lighting is by tungsten-filament lights at high level, supplemented by low-level lighting over the surface-plates and at the machines.

Trestle-type tables for drawings and pattern layouts, templates, etc., all 16-ft. long by 5-ft. wide, are arranged in between each of the surface plates. Flow-production is practised, with timber entry and initial preparation at one end of the shop. The superintendent's and control offices are on a raised platform at the centre, with patternshop requisites and drawing stores arranged underneath. On one side, a separate area is segregated for plaster patternwork.

Machinery

When it is realized that castings from some of the patterns weigh up to 12 tons, then the magnitude of the jobs which constitute the normal lines of production may be gauged, all the castings being for press tools. Sets of pattern machinery are grouped to facilitate access by personnel and so that no patternmaker has to walk more than two or three yards to use standard equipment. Thus, each machine group consists of a bandsaw, drill and a disc and bobbin sander with a surface planer and thicknesser in between these and the next group of tools. Together, these groups make up a total of six each of bandsaws, sanders and drills; there are seven bobbin sanders, three surface planers and three thicknessers. The machines are of various types, sizes and capacities, all being of UK manufacture. In addition, there is a crosscut saw, and two "dimension" saws, a recessing and a tenoner machine. There are also the usual tool-grinders and tool-sharpening and "doctoring" machines.

Timber used includes the usual pine, mahogany, plywoods and blockboards and some resin-impregnated laminates. It is interesting to learn that in the shop there has been an almost complete changeover from animal glues to the resin variety. Timber consumption averages about 80 standards of pine per year (one standard equals 165 cu. ft.).

Resin Shop

Passing from the main patternshop, the writer next inspected the firm's resin shop on an adjoin-

FIG. 1.—*General view of the south end of Pressed Steel Company's patternshop at Cowley, Oxford, giving an indication of its size and the nature of the work carried on. The raised office-block at the middle of the shop can just be discerned towards the top left of the picture.*

ing bay, where duplicate models, inspection fixtures and die-building aids (but no new resin patterns) are produced. This department, of floor size 120 by 33 ft., is regarded as one of the most modern in this country's automobile industry and duplicate models can be made up to any size required for the trade. The units are all produced in fibreglass/cured-resin laminates, a big advantage of the plastics over the mahogany originally used being dimensional and shape stability over long periods, unaffected by moisture.

Background to the Company

Pressed Steel Company of Great Britain, Limited, was formed in 1926 to apply patented techniques for pressing steel-sheet, and for welding, developed by the Edward Budd Manufacturing Company of Philadelphia. With the withdrawal of the American interest in 1935, the company became completely British owned and British operated. Pressed Steel have since continued to enjoy the valuable Patent rights acquired at the outset and to apply specialized industrial knowledge and methods essential to their effective development. Since the war, more than £4 million has been spent on extensions at Cowley, on developments at Linwood, near Glasgow, and at Theale, near Reading, and in building an entirely new factory at Stratton St. Margaret, near Swindon; £11,000,000 has been invested in new plant and equipment and the company's short history has throughout been one of surging expansion.

During this period, too, valuable progress has been achieved on the welfare side. As early as 1929, life-insurance policies were made available to every employee, the company bearing most of the cost of the premiums. Two years' later, a small hospital was built within the bounds of the factory, fully equipped and staffed with full-time doctors and nurses. These welfare facilities have since been extended several times and others of similar nature introduced.

Employment and Output

The firm's patternshops have evolved to their present size and scale of importance over the whole period of the firm's existence, and Mr. Jones, the superintendent, has been associated with their

FIG. 2.—*Further view of the Oxford firm's patternshop, also looking north, but photographed from about the middle of the shop.*

development for the past 35 years. It is accepted that the Pressed Steel Company are the largest tool-makers for car bodies in Europe and in addition to the employment of 170 men at the Cowley patternshop, a further 70 patternmakers are employed at the company's Swindon patternshop, and about 100 more at the works of Linwood, near Glasgow. In addition, the Cowley section is responsible for a considerable amount of sub-contracting of patterns amongst other firms, something like 10,000 individual patterns—each of quite considerable size—being placed annually with UK foundries. These represent a load on the British foundry industry of about 10,000 tons of castings per year, mainly in iron, but including a small (about 10 per cent.), but growing, proportion of steel castings and a few in non-ferrous metals.

Out of the total patternshop employment, 30 men are engaged in the resin shop.

Training

Naturally in a shop of this size, there is considerable scope for the training of young people and the recent opening of a pre-apprentice training centre at these works is indicative of the increase of emphasis on recruitment and acquisition of craft skills. No fewer than 20 apprentices are included in the figures of patternshop employees quoted. The system adopted is that after one-year's full-time pre-apprentice training, the youngsters are brought into the workshops and assigned to journeymen patternmakers, moving around so that they acquire all-round skill over the rest of their six-year apprenticeships. Among the objectives of the pre-apprentice period is an introduction to industrial conditions and the discovering of natural aptitudes.

Comment

It seems relevant to refer at the conclusion of this account to the implied query at the head of this article as to whether or not the patternshops at the Pressed Steel Company do indeed constitute the largest in Europe. Overall size can be assessed in many ways, numbers employed, physical sizes of shops, output in terms of raw materials converted or value of work produced. Yet in all these respects, the writer is of the opinion that the premises inspected excel. Certain it is that for size, cleanliness and efficient organization, the shops visited set a very high standard that it would be hard to match anywhere.

It thus remains to congratulate Mr. Jones and the directors of the Pressed Steel Company on their enterprise and foresight in organizing patternmaking facilities on this scale, and to thank them for permission to reproduce this account. Undoubtedly it is by setting such high standards in patternmaking that firms such as these contribute enormously to the welfare of the patternmaking industry in general.

Cotton Industry's Re-equipment too slow

The need for more machinery to be ordered by the cotton industry to place it in front of its competitors was stressed by Lord Rochdale, chairman of the Cotton Board, when he opened the Board's conference at Harrogate at the end of last month. He said that the present rate of re-equipping was inadequate; the total value of applications made to the Board by all sections of the industry since the Government's grant-aid scheme started last year was £32,750,000. The sectional totals were (up to October 13):—spinning, £17 million; weaving, £14,700,000; doubling, £800,000; and finishing, £250,000. If approved each scheme would rank for a 25 per cent. Government grant. Lord Rochdale said, "These figures scarcely represent more than one would expect from an already up-to-day industry for its normal development. In order to gain the maximum time, we have secured Board of Trade agreement to an extension of the period during which orders for machinery may be placed from July 8, 1962, to July 9, 1963.

Foundry Trades' Equipment and Supplies Association

Annual General Meeting

The Foundry Trades' Equipment and Supplies Association held its annual general meeting at the Waldorf Hotel, London, on Friday last, when Mr. W. E. Aske, then president, reported on the Association's activities as follow:—

During the year 1960, six new members were elected and there were three resignations making a total of 93 members at December 31, 1960. The accounts of the Association for the 12 months ending December 31, 1960, showed a surplus of £240 0s. 9d. compared with a deficit of £539 10s. for the previous year. The Council held six meetings during the year, and many matters of interest both to members of the Association and the industry received careful consideration, with appropriate action being taken where necessary.

Handbook Committee

The handbook committee continued to meet for the purpose of considering the publication of a fourth edition of the Association's handbook in the latter part of 1962, as a forerunner to the Foundry Exhibition due to take place in the following year.

Foundry Exhibition 1963

Bingley Hall, Birmingham, has been reserved for the next Foundry Exhibition which will be open from Thursday, May 16, to Saturday, May 26, 1963. The exhibition committee has held a number of meetings to dicuss the appointment of official organizers and consider also preliminary arrangements for the layout of stands. Subsequently all members of the Association were asked whether it was their intention to exhibit with an indication of the amount of stand space required by individual companies.

Dextrine Users' Committee

The dextrine users' committee met to consider what action should be taken by the Association in regard to an application made to the Board of Trade for an increase in the import duty on maize and milo starch, and subsequently a protest was made by the Association against the imposition of such a tariff. Having considered all the circumstances, the Government decided ultimately to reject the application.

Institute of British Foundrymen

A total of £320 7s. was subscribed by 32 FTE & SA members towards the cost of the 1960 annual conference of the Institute of British Foundrymen. Mr. W. Rawlinson continued to serve on the IBF subcommittee: TS.51 on "Foundry Terms," which had been formed for the purpose of preparing a glossary for the British Standards Institution.

Social Functions

For the first time a half-yearly luncheon for members was held in London and this received reasonable support. During the open discussion which followed it was suggested to the Council that on the next occasion, the luncheon should be held in Birmingham and arrangements were made accordingly with very satisfactory results. Nearly 200 representatives of member companies and their guests were present at the annual dinner on March 2, 1960. The principal guest was Mr. John Rodgers, M.P., and the guests of the Association included the presidents and chairmen of eminent organizations connected with the foundry industry. Appreciation is accorded to the dinner committee for the excellent arrangements which resulted in a most successful and enjoyable evening.

National Foundry Craft Training Centre

The Association supported an appeal for contributions towards the rebuilding of the National Foundry Craft Training Centre and in addition to offers for the supply of certain types of equipment, members contributed a total of £743 2s.

Survey of the Foundry Industry

An approach was made by the Department of Scientific and Industrial Research to the Association and a number of other organizations in the foundry industry in regard to a survey to be carried out by them on research and development in foundry engineering and equipment, this being devoted primarily to economics, organization and financing of research, and for the purpose of ascertaining in general terms how much research and development is being carried out. Subsequently a number of members of the Association were visited by the DSIR in connection with the survey and the Council appointed a research committee to form closer liaison with research organizations within the industry.

(The Report is signed by Mr. W. E. Aske, president, and Peat, Marwick, Mitchell & Company, the secretaries.)

Annual General Meeting

At the Council meeting of the Association held later that day, following a luncheon for members and guests at the Waldorf Hotel, London, Mr. R. Sutcliffe (Fordath Engineering Company, Limited) was elected president for the coming year in place of Mr. W. E. Aske. Elected as senior and junior vice-presidents respectively were Mr. A. Tipper (Harborough Construction Company, Limited) and Mr. B. N. S. Perry (G. Perry & Sons, Limited).

In the election for the Association's Council, newly balloted into office was Mr. F. H. Hoult (Constructional Engineering Company, Limited), all other members of Council who had resigned this year being re-elected with the exception of Mr. R. A. Miller. Following the ballot, however, Mr. V. L. Cashmore (British Moulding Machine Company, Limited) resigned owing to ill-health, and a nomination to fill this vacancy together with that caused by the election of Mr. Sutcliffe to the presidential chair will shortly be made. Mr. V. C. Faulkner also resigned from Council, but in view of his valuable contribution to the work of the Association since its formation he was asked to attend all future meetings in an advisory capacity; in his place Mr. F. Barrington Hooper (FOUNDRY TRADE JOURNAL) was invited to serve.

Dinner

At a dinner held the previous evening at the Royal Automobile Club, London, Mr. W. E. Aske was host to 13 members of Council.

POA Scottish Conference

The Purchasing Officers' Association is organizing a Scottish Regional Conference on November 23, 24 and 25. Meetings are to be held at the Golden Lion Hotel, Stirling. The first two days are being devoted to an instruction lecture programme, whilst the actual Regional Conference, at the same venue, will be on the third day. The Provost of Stirling, Wm. MacFarlane Gray, J.P., is to preside. Bookings may be made on a daily basis, the fee for the two-day Course, which includes luncheon, being £7 7s. and for the Scottish Regional Conference £4 4s., with a special charge for members and students of the Association of £1 1s. Reservations should be sent to the secretary, Purchasing Officers' Association, Wardrobe Court, 146A, Queen Victoria Street, London, E.C.4.

Joint Iron Council

Annual Report of the Executive Committee for the Year ending June 30, 1961.

At the annual general meeting of the Joint Iron Council, held in the Connaught Rooms, London, on November 8, the following report for the year ending June, 1961, was presented to members by the president, Mr. N. P. Newman:—

Introduction

Firm and buoyant trading in the ironfounding industry has been maintained throughout the 12 months ending June 30, 1961. Unfortunately, however, 1960/61 has been far from a satisfactory year for the United Kingdom economy as a whole. Overall, industrial production has tended to stagnate; productivity has failed to show any marked improvement despite a generally high level of demand and a very low level of unemployment. The UK international financial position has been weakened by the failure of its exports to respond sufficiently to meet the import bill and the need to meet other commitments overseas, while the spiral of inflation has once again started to assume disturbing proportions.

This picture is very much the same as before the protracted recession of 1956, '57 and '58 and the ironfounder does not need reminding what this recession meant for the industry. However, history does not inevitably repeat itself and there are some signs of vision in the measures that are being taken. First and foremost, the Government is making a positive approach to negotiate terms for uniting the United Kingdom with the rapidly expanding six nations of the European Economic Community under the Treaty of Rome. Together with the stand made on the wages front at the time of the special credit measures, this must surely mean that the inflation problem is to be tackled. Also it might be hoped that the failure to cut investment allowances is a sign that the Government realizes the supreme importance of investment expenditure on the plant and equipment which the foundries help to supply. The restrictions on local authority finance and bank lending could cause difficulties, but it is thought that if they are selectively operated vital utility investment—gas and water supply—and industrial investment will not be seriously affected.

(At this time attention is centred on the possible outcome of Britain's new association with Europe. The relative position of the British ironfounding industry within the complex of the European industry is shown in an appendix to the report which has been largely devoted to the broad comparison of European ironfounding in a world setting.)

British ironfounders still lead in Europe but there can be no doubt that a new challenge faces them. It is reassuring to realize that the UK ironfounding industry has already had four years' experience of discussing its affairs with the members of the European Economic Community through participation in the European Committee of Foundry Associations.

Everything depends now upon the United Kingdom putting her own house in order, achieving a new dynamic force of industrial progress and thus becoming a respected leader as well as counsellor in Europe. This will not happen if national investment is not placed high in order of priority. Ironfounders will hope that their fullest co-operation will be called for in building new and more advanced machinery, plant, vehicles, and buildings to house them, together with essential gas and water supply facilities. The problem of cost and price inflation lies in the path of this as does the related problem of the balance of payments. There surely must be other solutions than unemployment and recession.

State of Trade in the Industry

Iron Castings.—The rate of production continued steady throughout the period. The easing in the output of the automobile iron foundries and the slight weakening in demand for pressure-pipes were balanced by the firm upward trend in the engineering and other sections.

The final quarter of 1960 saw the effects of widespread recession in the automobile industry reaching back to affect the automobile ironfounders. However, this situation fortunately did not worsen and a large measure of recovery took place over the first few months of 1961. Motor-car sales, principally as a result of weakness in export markets, have remained lower than in 1960, but the demand for tractors and commercial vehicles has been well sustained. A high level of investment by the steel industry ensured a firm demand for rolls and other castings for iron and steel works plant, although the fall in demand for steel itself in 1961 has at the end of the period led to some easing in production of ingot moulds. The building industry continued very busy and in consequence the production of light castings increased.

The most notable progress was made by the engineering sections where castings requirements for capital equipment and machinery made considerable demands on the foundries. Production of castings for the electrical-engineering industry, for machine-tools and most types of machines, rose significantly but, on the heavier side, little improvement was seen in marine engineering or in the production of castings for boilers and boiler-house plant. The demand for castings for domestic purposes remained weak, but the slight improvement in the production of castings for railway equipment was a small, although helpful, contribution to the overall position.

The current prospect is one of considerable uncertainty. The momentum of capital expenditure should insure the engineering sections against early difficulties, but the possible effect of local government spending restriction is a disturbing factor for

the makers of pressure-pipes. The demand for motor-cars is seasonally weak in the second half of the year and the operation of increased purchase tax may weaken home market demand, in which case hopes would have to be pinned on better sales abroad. The building industry, though still busy, is singularly susceptible to high interest rates and credit restriction, and an early reduction in the present high rates of interest will be welcomed.

The reduction in steel requirements is giving some concern to that industry and it cannot be supposed that investment in plant for steelworks will continue entirely without regard to the apparent demand for steel. Again the question is one of how soon expansion in the economy can be expected. At the present rate of steel production, some slight weakening in requirements of ingot moulds may lie ahead.

Pig-iron Production.—Foundry pig-iron production was lower during the 12 months to the end of June, 1961, than in the previous 12 months' period. This reduction was wholly accounted for by low-phosphorus qualities which were 8 per cent. down. The production of high-phosphorus, hematite, and refined irons has been marginally higher. Exports of foundry iron were much reduced—54,000 tons compared with 125,000 tons in the previous period.

Coal and Coke.—In September, 1960, the National Coal Board, with the agreement of the Minister of Power, decided to make substantial increases in the prices of coal and coke. The Joint Iron Council at once lodged a detailed statement of the effects of the increases on the industry with the Industrial Coal Consumers' Council. The Council of Ironfoundry Associations' executive committee arranged for a deputation to call upon the director-general of marketing of the National Coal Board to put the views of the ironfounding industry and to demonstrate in plain terms the effect of the increases on ironfounders' costs.

In industry generally there was a widespread sense of dissatisfaction with the increases and this was reflected in the report made by the Industrial Coal Consumers' Council to the Minister of Power. The exchanges between the Consumers' Council and the Minister have been published and while they did nothing to ameliorate the effects of the increases they highlighted the reaction of industry and emphasized for the future the desirability of adequate prior consultation.

Iron and Steel Board

Office bearers of the JIC have held regular meetings with members of the Iron and Steel Board. Among the matters discussed with the Board have been coal and coke prices, long-term demand, research, rating and valuation, and the European Economic Community. The Board has appointed a technical advisory panel to advise on scientific research and technical development in the iron and steel industry. Mr. H. Morrogh, director of the British Cast Iron Research Association, is an associate member of the panel. The Minister of Power appointed Mr. N. C. Macdiarmid, vice-president of the Joint Iron Council, as a part-time member of the Board to succeed Mr. A. E. Pearce, who retired on May 31, 1961.

Market Research

The annual report for 1959-60 mentioned the work of a special committee set up by the Council of Ironfoundry Associations to prepare an estimate of iron castings production in 1965. This estimate was completed and the results of the committee's work were submitted to the Iron and Steel Board. The committee concluded that demand for iron castings in 1965 would be of the order of 4,000,000 tons but dependent on general industrial activity might reach 4,250,000 tons. The committee then turned its attention to a forecast of the raw materials required to sustain the production forecast for 1965. The results of this inquiry were also submitted to and discussed with the Iron and Steel Board. The Board referred to this subject at length in its third Special Report on Development published in May, 1961.

This is the second five-year forecast prepared by the CFA and the experience gained in the compilation of such estimates will enable the industry to co-operate in any larger scale planning which might be promoted by the Government.

Training and Education

During the past year there has been a considerable growth of public interest in training. Two debates in the House of Commons, major publications by both the Conservative and Labour parties and frequent questions in the House indicate the extent to which the climate of opinion towards training is changing. The greatly increased activity of the CFA in this field not only reflects this changing opinion, but also shows the extent to which the industry is ahead in the efforts it is making.

Apprentice Training.—In the field of apprentice training, a number of developments have taken place during the year. The appeal by the trustees of the National Foundry Craft Training Centre for funds has reached a preliminary total of £24,000, and a new training foundry is in process of erection as the first phase of the rebuilding programme. It is hoped that it will be opened early in 1962.

Further progress has been made towards the provision of a certificate of craftsmanship for the industry. The technical college course for craft apprentices is at present being revised, the revisions being likely to take effect in September, 1962, and concurrently the City and Guilds of London Institute is preparing to call together representatives of Trade Associations and other interests to form a craft training committee for the foundry industry. The Institute will provide the administration for this committee and also issue the certificates, which will be given for practical skill acquired in works training.

The European Foundry Apprentice Competition was held this year in Munich, and the British team came third, behind the German and French teams.

The most successful candidate from the UK came seventh in the overall placings, though he was placed first in the theoretical tests.

An interesting development has taken place in East Anglia. The Braintree College of Further Education is to act as a centre for a block-release scheme of technical education for craft apprentices from all parts of the area. The apprentices will spend three periods of five weeks full time in the College each year, instead of receiving day-release throughout the year, which has proved ineffective owing to the scattered nature of the industry in the area and the lack of suitable educational facilities in many places. The college is building a new teaching foundry at a cost of some £25,000.

Technician Training.—The training committee of the CFA set up a sub-committee as a result of a study conference held in November, 1959. The sub-committee made proposals for the works training and technical college courses for foundry technicians. These proposals called for a new educational qualification of Higher National Certificate standard. The Institute of British Foundrymen, having come to similar conclusions, agreed to a request from the CFA to discuss such an examination jointly with the Ministry of Education. Its implementation would require the setting up of a joint committee with the Ministry, and negotiations to this effect are in progress.

Foreman Training.—The demand for short-technical and general courses for supervisors has continued to grow. Four short-technical courses have been held during the year under review, and it is interesting to note that these seem to have stimulated interest in the general supervisors' courses, the fourteenth of which was held in June, 1961.

Advanced Technological Training.—The Government has appointed a committee under the chairmanship of Lord Robbins to study problems of higher education on a national basis. The CFA training committee is preparing evidence for submission to the Robbins Committee on behalf of the ironfounding industry. In addition the training committee has arranged a study conference on "Higher Education in Foundry Technology" to be held in November, 1961.

An awards panel consisting of two members of the training committee and one member of the Joint Iron Council finance committee has been set up to deal with all grants made by the Council to students undertaking advanced or university courses. The new three-year sandwich course at the National Foundry College, leading to the award of an advanced diploma, has now successfully completed its first year of working. An encouraging number of students have enrolled to begin the course in the autumn of 1961.

Commonwealth Technical Training Week.—The Council took an active part in Commonwealth Technical Training Week, which took place from May 29 to June 3. A folder and a booklet were provided for the use of companies throughout the country who were participating in the local activities of the Week, and a stand was taken at the National Exhibition at the Royal Exchange in London. Some 35,000 copies of the two publications were distributed. The Week, which was extremely successful, provided a most useful opportunity for making contact with parents, careers masters and school children, and drawing their attention to the careers opportunities in the industry.

Literature and Visual Aids.—In addition to the careers literature produced with Commonwealth Technical Training Week in mind, the year has also seen the publication of the revised set of 15 Wall Charts on foundry techniques, a booklet reproducing these in miniature, a flow chart of the industry's processes and the careers available in it, and "A Simple Guide to Ironfounding," intended for 15 and 16-year-old school-leavers and new entrants to the industry. The demand for all these publications is heavy, and encouraging reports on their usefulness have been received both from the industry and from schools and technical colleges.

Overseas Trainees.—Requests are continually received to place numerous highly-qualified trainees from overseas in the industry. Although the industry is continuing to play its part in the training of these young men it is still unfortunately impossible to make arrangements for them all. Facilities can be made available only to those who apply through such bodies as the Ministry of Labour (under the Colombo Plan), the Federation of British Industries, and the British Council.

General.—The education and training staff have made many visits during the year to foundries, schools and colleges throughout the country. In addition, invitations to speak at meetings, conferences and courses have provided opportunities to discuss the industry's training problems and to disseminate information about the services available to a wider public.

Health and Safety

The report on the investigation into the incidence of pneumoconiosis in small iron foundries, completed last year, was widely circulated and generally well received. The Confederation of Shipbuilding and Engineering Unions studied the report and at the Confederation's request a meeting was arranged between representatives of the Confederation and representatives of the CFA health and safety committee early in 1961 to discuss its implications. No special criticism was made by the trade union representatives, though the findings were used to advance a proposal for the establishment of a pilot health service for foundry workers (a proposal which, the CFA suggested, might be more appropriately discussed in the Ministry of Labour's Joint Standing Committee covering the whole of the foundry industry). The survey was also discussed by medical officers from the industry who concluded that it had been successful in its limited aim of assessing the incidence of dust change in the chests of workers in a group of small and largely unmechanized foundries. The medical officers considered that the results did not point to an imperative need to collect further information

in this connection from this, or any other, sector of the industry.

The Empire Rheumatism Council is carrying out an investigation into the incidence of rheumatic complaints in industry. The health and safety committee and the Manchester and District Ironfounders' Association have co-operated with the Empire Rheumatism Council in arranging for inquiries to be made in a number of iron foundries in the Manchester area.

About 50 foundries participated during the year in a detailed study of the most common categories of foundry accidents, the results of which will be used in the preparation of accident prevention posters to be distributed to iron foundries in the forthcoming year. During 1960, explanatory documents on first-aid were issued to all iron foundries in connection with the new first-aid requirements introduced under the Factories Act, 1959.

During the year good progress was made by the safety committee in the preparation of a manual of safe-working practices. The original draft has been amended in the light of recent factory legislation and a substantial amount of new material has been added in an endeavour to make it comprehensive. The safety committee reviewed the position reached in the work of the Joint Advisory Committee on Foundry Goggles. During 1960, the Joint Advisory Committee submitted a third report to HM Chief Inspector of Factories confirming the principal finding of previous reports that toughened- and laminated-glass lenses were unsuitable for use in foundries, but that certain plastic lenses gave complete protection. Comments from member-firms tended to call in question the complete relevance of these findings to actual conditions in the foundry and representations have been made to HM Chief Inspector of Factories.

A number of legislative measures bearing upon health and safety in industry received detailed attention during the course of the year. Among these were the revised preliminary draft of the Non-Ferrous (Melting and Founding) Regulations; the statutory draft of the Ionising Radiations (Sealed Sources) Regulations; the preliminary draft of the Unsealed Radioactive Substances Regulations; and a number of orders made under the Factories Act, 1959—notably those dealing with the washing of walls and ceilings, first-aid arrangements and training, fire precautions and washing facilities. Member-firms were kept in touch with these developments, and on a number of occasions representations were made to the Ministry of Labour on the terms of the draft Regulations, and for interpretation of doubtful points in the orders promulgated.

The safety committee continued to participate in the work in this field of the European Committee of Foundry Associations, and substantial contributions were made to studies into comparative pneumoconiosis compensation statistics, measures for protecting various parts of the body and education for accident prevention.

During the year the Minister of Labour decided to reconstitute the Joint Standing Committee on Health and Welfare in the Ironfounding Industry "to keep under review and to advise the Minister from time to time on matters affecting the health, safety and welfare of persons employed in the ironfounding industry." The CFA continued to be represented on the Joint Standing Committee by Mr. H. A. Bonney and Mr. J. W. Gardom.

Clean Air

The technical panel on clean air has held several meetings to consider matters arising from implementation of the clean air legislation. Having regard to the large number and varied location of cold-blast cupolas, the reported difficulties with that type of furnace have again been relatively few. Foundries are required to minimize the emission of grit and dust and in the absence of standards there are sometimes differences of opinion between the officials in one district and in another as to the acceptable levels of emission. In one area, this has revived the idea of central technical guidance for industry and local authorities alike. Ironfounders can, of course, avail themselves of the experience and advice of the British Cast Iron Research Association in this field.

Hot-blast cupolas are supervised by the Alkali Inspectorate of the Ministry of Housing and Local Government. The number of plants is still small —40 at most, including a few used for refined-iron production—but the Chief Alkali Inspector for England and Wales regards the emissions from this type of furnace as "the major, serious and difficult matter" on the ironfounding side of the iron and steel industry.

In January, 1961, a joint working party composed of representatives of the Alkali Inspectorate and the industry was set up; the terms of reference are "to examine and report on the emission of smoke, grit, fume and dust from hot-blast cupola installations with particular reference to means being taken and to be taken to reduce these to the practicable minimum." The chief question before the working party is whether the fume from the larger furnaces can be made harmless and inoffensive by means of dispersion from tall chimneys, or whether arrestment of the fume will be necessary to prevent justified complaint. The working party has held three meetings and visited four of the plants equipped with some form of "agreed means" for dealing with the emissions. Larger plants will be coming into operation before the end of 1961, and it would seem essential for the working party to examine the results obtained in these plants before general conclusions can be formed. One large iron foundry in a difficult site condition has decided to install an electrostatic precipitator in order to prevent nuisance.

The special interests of the producers of foundry pig-iron are covered by the Council of Iron Producers' representative on the air and river pollution committee of the British Iron and Steel Federation. The Federation has continued to discuss periodi-

cally with the Chief Alkali Inspector the measures required in respect of the calcination and drying and sintering of iron ores, and blast-furnace operation. Broad decisions on most of the blast-furnace problems have been reached.

Market Development

In October, 1960, the National Federation of Engineering and General Ironfounders put forward proposals for a new programme of market development. The Federation attached such importance to them that it offered to make a substantial financial contribution to enable the work to be started without undue delay. The initiative shown by the Federation was warmly welcomed by the Council of Ironfoundry Associations; and other constituent associations offered financial support. The Joint Iron Council also agreed to make a contribution and a market development fund has thus been created.

A market development committee has been appointed under the chairmanship of Mr. D. G. Bisset, a former vice-chairman of the CFA, and for many years chairman of the Ironfounders' National Confederation. This committee will guide the activities of the market development officer, Mr. R. A. K. Loxley, who commenced his duties in June, 1961. The committee has agreed a programme for the initial stages but it is as well to emphasize its essentially long-term nature and the fact that without the whole-hearted co-operation of member-firms and associations, the project cannot meet with the success it deserves.

Transport

During the year it was decided to reconstitute the CFA transport committee (which was established in 1950) as a consultative panel, and national and local associations were invited to nominate representatives to the panel. This re-organization will permit the wider representation of special sectional or area ironfounding transport interests which may be necessary in the light of proposals to reorganize nationalized transport.

Member-firms were advised during the course of the year of a number of transport matters affecting their interests—such as the Ministry of Transport's proposals for the control of abnormal indivisible loads carried by road; the continuance of demurrage and internal-user concessions; the recommendation of a 10 per cent. increase in rates made by the Road Haulage Association to its member-firms; and the establishment of a Ministry of Transport Committee to examine the adequacy of British docks and harbours.

Research

The Council has continued to receive much valuable assistance from the BCIRA on technical questions arising in the course of the Council's work. Detailed accounts of the Association's activities are given in its own publications. The Council made a contribution to the Research Association of £118,000 in the year to June 30, 1961. The technical research fund committee of the Institute of British Foundrymen has received its usual grant towards the expenses of its work.

British Standards Institution

The JIC has continued to support the work of the British Standards Institution and to take an active part in it through representation on the Iron and Steel Industry Standards Committee and the Solid Fuel Industry Standards Committee and their various sub-committees. During the year under review a new British Standard for pearlitic-malleable iron-castings was published, and a revision of that on iron castings with spheroidal- or nodular-graphite was issued. The preparation of a standard to cover the principal types of austenitic cast irons has neared completion. The sub-committee on grey iron has received fresh data from the BCIRA which supports the contention that the temperature limitations on the use of grey cast irons in specifications dealing with steam fittings could be safely and appreciably raised; the subject will be pursued in the engineering division of the BSI. The Council is now represented on a prevention of corrosion committee whose work has been extended to cover cast iron. With the collaboration of constituent associations and member-firms the drafts of several of the product specifications bearing on uses of iron castings have been examined and advice tendered to the responsible technical committees.

Rating and Valuation

During the year the Government enacted the Rating and Valuation Act, 1961, of which the most important provision for industry was that terminating the derating of industrial hereditaments. This measure will have a severe effect upon the iron industry, in common with heavy industry generally. For this reason the Council lent its support to the efforts of the Federation of British Industries (which in the event did not prove successful) to secure the extension to industrial properties of the power afforded to the Minister to de-rate domestic properties. An explanatory memorandum on the operation of the Act is being prepared.

Government Committee on the Problem of Noise

The Council submitted comments for the consideration of the Committee on the Problem of Noise established by the Ministry of Science, which was initially concerning itself with the effects of noise upon the general public. The Council indicated that means of reducing noise were being studied and implemented in the industry. The opportunity was also taken to emphasize the special difficulties encountered in attempting to reduce noise from heavy industrial processes and the inequitable position under the Noise Abatement Act, 1960, which exempts statutory undertakers from prosecutions for, or orders to abate, noise and vibration to which private industry is liable. Later, the Committee pursued its investigations into the field of the effects of industrial noise on workers in

industry, and information on this aspect of the problem was also submitted.

Water Conservation

The Ministry of Housing and Local Government has circulated to industry a memorandum containing new proposals for legislation for the control and conservation of water supplies. Conservation authorities based on river basins under a central water authority are proposed. The activities of these authorities would be financed by licence fees paid by water users. It is expected that the Minister will take an early opportunity of bringing forward a bill on the subject.

Trade Effluents

The law affecting the discharge of trade effluents to rivers and sewers has been changed by the passing of the Rivers (Prevention of Pollution) Act, 1961, and the Public Health Act, 1961. This change in the law gives local authorities and river boards a tighter control over the discharge of effluents. Iron producers particularly will face many problems in trying to satisfy the authorities. In some cases considerable expenditure will have to be incurred in meeting the conditions laid down for the discharge of effluents.

European Economic Community

The iron industry, through its indirect exports of components for engineering and other assemblies as well as because of its considerable volume of direct exports such as pipes and foundry pig-iron, is closely concerned with the Government's project to associate Britain with Europe by joining the European Economic Community. Such an association would principally affect ironfounders because, in common with most other industries, they would be covered by the provisions of the Treaty of Rome which inaugurate the European Economic Community. Pig-iron producers would be affected by the Treaty of Paris which established the European Coal and Steel Community, membership of which would be implied.

A close study has been made of the probable effects of this step on the ironfounding industry. Such statistical evidence as is available suggests that, from the point of view of general basic costs such as labour and raw materials, the industry in the United Kingdom is competitive with its European counterparts while in general it retains its lead in productivity. The disturbing aspects are the rate of advance in many of the countries belonging to the Community, and their relative stability of costs.

There can be little doubt that, if the difficult problems relating to Commonwealth trade and British agriculture can be solved, the UK will shortly be a member of the European Economic Community. In this position it will increasingly become the ironfounders' problem to gain the best advantage of growing European markets as tariff discrimination falls away; to some extent this may be possible through direct exports, but mainly through the support of their customers' export needs.

The balance of advantage is fine and competition from European foundries cannot be treated as a matter of academic interest. British tariff walls are relatively high and, as they crumble, an efficient continental foundry has an opportunity to launch its sales efforts in the United Kingdom. This country has successfully competed with Europe in third markets for many centuries without special trade privileges. If Britain is to move gradually towards competition in a tariff-free European market, then one can be confident that its success will continue if positive solutions can be found to the problems of inflationary increases in basic costs.

European Committee of Foundry Associations

The membership of the European Committee of Foundry Associations is likely to be expanded in the near future. The admittance of Sweden is to be ratified in September, 1961, and negotiations with both Finland and Norway are at present taking place. The presidency of the European Committee for 1961 is held by Spain. In 1962, the presidency will go to Denmark and in 1963 to the United Kingdom.

The subjects handled by the 12 committees of the European Committee illustrate the scope of the Committee's activities and include among others, training, health and safety, productivity, time-study, costing, market research, raw materials and problems arising in the foundry industry which result from the trend of European economic co-operation.

Committee No. 7a, under the chairmanship of Mr. M. M. Hallett, produced a report on factors governing the uses and consumption of castings which was extremely well received by the European Committee; the CFA staff acted as a secretariat for this work. This latter committee, dealing with European Institutions, has been responsible for producing a brochure introducing the European Committee and outlining its organization and work. The brochure has been given a very wide circulation. It has also assisted in promoting the European Committee's aim to achieve economic unification by presenting a European point of view, instead of an exclusively national view, in one important European industrial sector.

Press and Publications

At the end of the year under review, Mr. Basil Tripp, who had been press and publications officer since 1952, left the staff to take up an appointment with the British Iron and Steel Research Association. Mr. Tripp's work on numerous special newspaper supplements benefited the industry by bringing it increased publicity and his assistance to the Press was widely appreciated in Fleet Street. He was responsible for organizing the Council's banquet every year and the outstanding success of the 1960 banquet in Guildhall owed much to his

ability. During the year, surveys of the industry were published in *The Glasgow Herald* and *The City Press*, the weekly newspaper of the City of London, and articles were prepared for *The Times*, *The Guardian*, and *The Financial Times* and *The Yorkshire Post* annual reviews of industry, as well as for the trade and technical Press.

Annual Accounts

The improvement in trade, noted in last year's Report, has continued and in consequence the income from the pig-iron levy has increased. This increase was supplemented during the year by an increase in the rate of levy on two grades of iron. The measure of the improvement can be seen in the fact that in 1959/60 only £72,000 of a total of £122,000 was paid to the BCIRA out of income, the remainder being an advance payment in 1958/59 which had the effect of depleting the JIC's reserves. In 1960/61 a total of £118,000 was paid to the Association out of income. Thus in the two financial years 1959/60 and 1960/61 the total contribution to the Association was £240,000, an increase of £20,000 on the Council's assured contribution of £220,000.

Mr. A. E. Pearce

The executive committee wishes to record its gratitude to Mr. Pearce for his outstanding services to the organization over many years up to his retirement this year. Mr. Pearce had been associated with the CFA since its formation in 1941 and with the JIC since its establishment in 1945.

(Copies of the balance sheet and the revenue and expenditure account for the year ended June 30, 1961, were distributed to member-firms with the original Report.)

At the business meeting following presentation of the report, the existing officers were all re-elected.

Protective Equipment and Safety

Industrial judges are taking notice that the individual is responsible for his own safety, said Mr. T. Hobby, chairman of Nottingham Industrial Accident Prevention Group, at their meeting last month. He said that he had noticed that over the past five years judges were not holding employers entirely responsible for accidents to their workers and were awarding less damages. He said, "If protective equipment and clothing is provided, the employees must wear it, but you can't force every man to do as he should every minute of the day. It is a matter of getting people to realise that accident-prevention is a 24-hour-a-day job, one that is always with them." One reason for accidents, he said, was that people grew so accustomed to their jobs that they did not bother to think.

Mr. S. H. Carter, district factory inspector, told members that the Factories Acts 1961, to come into force next April, would combine the Factories Acts of 1937, 1948 and 1959. He added that under new Regulations, anyone possessing radioactive substances in their factories would have to notify the local inspector.

Forthcoming Events

NOVEMBER 21

Combustion Engineering Association

Southern region: Discussion on "Coal Handling from Store to Boiler," to be opened by F. S. Stent, 10.30 a.m., at the Criterion Restaurant, Piccadilly Circus.

Institute of British Foundrymen

Slough section: "Dust, the Devil and the Doctor," by Dr. D. G. Machain, 7.30 p.m., in the Lecture Theatre, High Duty Alloys, Limited, Buckingham Avenue.

East Anglia section: "Introduction to the Manufacture of Malleable-iron Chain," by R. Leeks, 7.30 p.m., in the Lecture Theatre, Ipswich Civic College, Rope Walk, Ipswich.

NOVEMBER 22

Institution of Mechanical Engineers

Ordinary meeting: James Clayton Lecture on "Reflections on the Institution's Role in Engineering Education," by Prof. E. Giffen, 6 p.m., at 1, Birdcage Walk, Westminster, London, S.W.1.

Manchester Metallurgical Society

"Metallurgy of the Rarer Metals," by J. C. Chaston, 6.30 p.m., at the headquarters of the Manchester Literary and Philosophical Society, George Street.

Institute of British Foundrymen

Birmingham branch: "Instrumentation in the Foundry," by D. C. Sims, 7.15 p.m., at Great Charles Street.

NOVEMBER 23

Institute of Metals

Sheffield local section: Symposium on "Inclusions in Metals," by B. P. Barnsley, T. R. Allman, and D. A. Melford, 2 p.m., in the Applied Science Building of the University, St. George's Square, Sheffield.

Institute of British Foundrymen

London branch: "Are New Corebinders worthwhile in a Jobbing Foundry?", by E. H. Beech, 7.30 p.m., at the National Liberal Club, Whitehall Place, London, S.W.1.

NOVEMBER 24

Institution of Production Engineers

Derby section: "Training Foremen," by D. B. Beynon, 7 p.m., in the Louis Room, St. James's Restaurant, St. James's Street, Derby. (Joint meeting with the British Institute of Management.)

Institute of British Foundrymen

Falkirk section: "Feeding of Castings," by A. Tipper, 7.30 p.m., in the Temperance Café, Lint Riggs.

Coventry section: Annual dinner/dance, 7 p.m., at the Hotel Leofric.

A change in date is announced for the "Men Only" dinner of the Beds & Herts section. This will now be held on March 2 instead of March 16 as originally planned.

Johnson Matthey's Acquisition

Johnson, Matthey & Company, Limited, have acquired the majority of the shares of the leading Belgian precious metal company, Pauwels Frères S.A. This Belgian company, established in 1864, has a long history of friendly relationships with Johnson Matthey, and for over 30 years has acted as their principal agency in Belgium. The company has offices and works situated on one of the main boulevards of Brussels, and a reputation for integrity and quality.

The future name of the Belgian company will be Johnson Matthey & Pauwels S.A. Mr. H. Limbourg hitherto general manager, becomes managing director, and Mr. L. Mendel the general manager, while Mr. R. Turner and Mr. P. G. Smyrk (directors of Johnson Matthey) join the board of the Belgian company. Since 1956 Johnson Matthey have acquired manufacturing and trading interests also in France, Holland, Italy and Sweden.

Equipment and Supplies

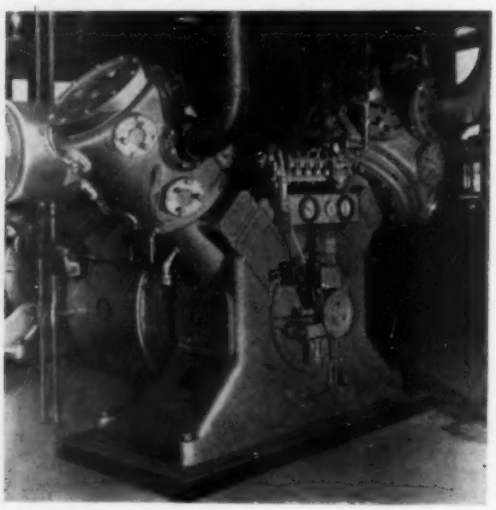
Compressor

A new range of compact, heavy-duty, water-cooled, double-acting, crosshead-type, stationary air-compressors, in which the cylinders are set 90 deg. apart, has been introduced by the Consolidated Pneumatic Tool Company, Limited, of 232, Dawes Road, London, S.W.6. The new range—the Y class—(Fig. 1) is available in seven sizes with outputs of from 372 to 1,615 cu. ft. per min., at pressures of from 80 to 125 lb. per sq. in., the range covered being from 75 to 300 b.h.p. Multi-stage units are available for pressures of up to 3,000 lb. per sq. in. The compressor can be driven by a flange-mounted motor, vee-belt drive or by a direct-coupled motor.

In these compressors, the ribbed and webbed frame is of high strength cast iron and is integral with the crankcase, and has been specifically designed to support the motor. The guides which accommodate the double acting crosshead, are also cast integral with the frame to give rigidity to the frame neck and to ensure permanent alignment. The crossheads are one-piece steel castings, faced with Babbitt and grooved for lubrication. The cylinders of the "Y" range are one-piece castings, Meehanite being employed, with a thickness which allows two reborings. The first stage piston is of aluminium alloy and the second stage is of cast iron, these being of equal weight to give balanced operation.

Overall dimensions vary with the size of the compressor and with the type of motor and coupling employed. A 150-hp compressor in this range operating at 600 rpm. and having an actual delivery of 776 cu. ft. per min., employs a low-pressure cylinder 16-in. dia. and a 10-in. high-pressure cylinder, with a stroke of 7 in. This unit, when the motor is flange mounted, occupies a space measuring 6 ft. 2 in. by 8 ft. 2 in. by 5 ft., the latter dimension depending on the make of motor used.

FIG. 1.—*An example of the new Y-class heavy-duty air compressors introduced by the Consolidated Pneumatic Tool Company, Limited.*



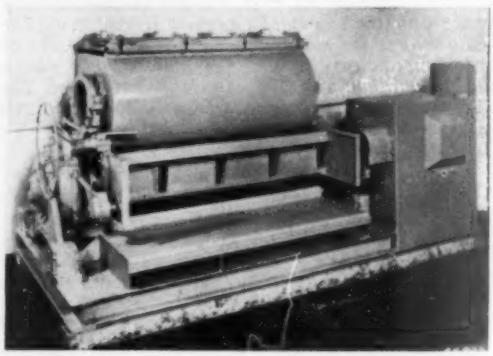


FIG. 2.—*One of the larger types of drum finishing units produced by Davies Magnet Works, Limited.*

Drum Finisher

Davies Magnet Works, Limited, Thundridge, near Ware, Herts, are preparing to place on the market a "Selecto Vibro-finisher," designed for deburring, descaling, burnishing and colouring operations on components, as-cast or as-machined. The unit (Fig. 2) comprises a cylindrical chamber in a horizontal position, mounted on a four-bearing positive eccentric vibrator which causes the contents of the cylinder to be in constant vibration and to travel around the interior circumference of the cylinder, which is plastic-lined. Various sizes of unit are available, from 14-in. dia. by 12-in. drum size with a drum volume of one cu. ft. to a 27-in. dia. by 54-in. drum size with a volume of 18 cu. ft.

Dust Collectors

Dallow Lambert, Limited, Thurmaston, Leicester, announce the Uma Unimaster range of unit dust-collectors which it is reported incorporate a new design of one-piece filter pad (which allows for easy removal and of replacement of the filter inserts), simplified shaker linkage, and a new Patent shaker-bar. Additional improvements claimed for the units are improved fan performances; re-designed dust-seal pads to withstand greater pressure of differentials; easier manual release of filter-pad seal frame, and an extended range of filter fabrics. The range has been increased to include units with 150 to 250 sq. ft. of filtration area. A complementary piece of electrical equipment also available is the Fulimatic control system for filter cleaning which provides controlled-time-cycle shaking each time the fan is stopped.

Export Service: Sales Audits, Limited, Great New Street, London, E.C.4, announce the setting up of a service organization designed to deal with British manufacturers' queries on selling in Europe. Answers are provided, the firm state, to such questions as what marketing and sales policy to adopt; how strong is the competition; what prices should be charged; who are the most suitable distributors, wholesalers and retailers; how strong is the demand for the product, and how to pack, advertise and promote it.

Resin Binders: Leicester, Lovell & Company Limited, announce that with effect from November 1, the price of all liquid and solid Epophen epoxide resins supplied in bulk quantities reduced by 6d. per lb.

IBF National Works Visits Day

On the invitation of the Lancashire branch, a complement of well over 200 members of the Institute of British Foundrymen assembled in Whitworth Street West, Manchester, on the morning of Friday, October 27, to join the coaches taking them to pairs of foundries in the area, as part of the IBF National Works Visits Day function*. In general, an inspection was made by each of six parties of one plant in the morning and another plant nearby in the afternoon, with luncheon in between with one of the firms as hosts and tea provided at the conclusion of the afternoon's programme.

Evening Dinner

Most of the members who had participated in the day's visits forgathered at the Grand Hotel, Manchester, for dinner in the evening of the same day. As guests on that occasion were representatives of the host firms of the morning and afternoon visits, making a total of about 160 and including the president and several past-presidents of the Institute. Mr. E. H. Beech, Lancashire branch past-president, as Master of Ceremonies, called on Mr. F. Lord, this season's president of the branch, to address the gathering. Mr. Lord welcomed the company and on behalf of the Lancashire organizers of the visits thanked the various works managements particularly for accepting the parties and looking after the parties with so lavish hospitality. Next, Mr. D. A. Richards, president of the Institute, expressed the gratitude of members present to the Lancashire branch (and particularly those personally involved in organizing the function) and endorsed the branch president's remarks in respect of the remarks he had directed to representatives who were present of the firms which had been visited. In extend-

* Particulars of all 12 works which accepted parties of visitors were recorded and illustrated in the JOURNALS of October 12 and 19.

Section of the top table and part of the general assembly at the dinner which followed the day's visits. The group at the top table includes the president, senior and junior vice-presidents, and several past-presidents of the Institute, with the principal guests, representing the managements of the works visited.

Group of "IBF National Works Visits Day" participants photographed outside the main offices of Thomas Robinson & Son, Limited. The foundry of this firm of woodworking machinery and flour-mill engineers was toured on the Friday morning (October 27). The works manager, Mr. H. Samson, is on the extreme left of the picture, and in the front row, Lancashire branch representatives include Mr. H. Haynes, Mr. H. Booth, Mr. H. Buckley (secretary) and Mr. W. Collinge, who, as foundry manager, represented the host firm.

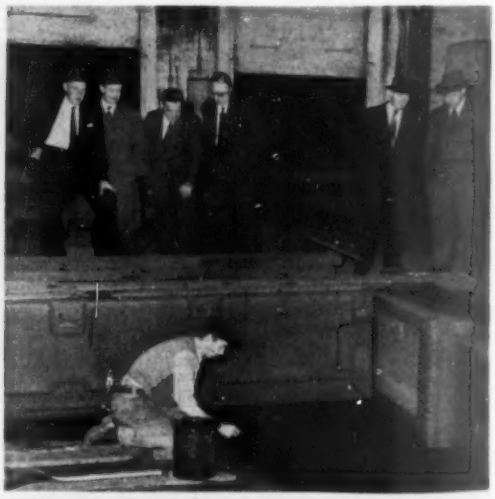
In these three photographs, from left to right, the top group is Mr. G. R. Shotton and Mr. J. Blakiston (national past presidents), and Mr. D. A. Richards, national president of the Institute. Seated in the middle picture are Mr. G. Lambert (national secretary), Mr. G. R. Webster (national senior vice-president), and Mr. R. F. Horton (national junior vice-president). The bottom photograph shows Mr. H. Buckley (Lancashire branch secretary) and Mr. F. Lord (Lancashire branch president), chatting with a representative of one of the host firms.

ing this "thank you" to the stewards, who had made the day run so smoothly, he said they had had to handle a record attendance. Although some few applications to participate had had to be refused, it was explained that this was really due to place requests being sent in late, otherwise it might have been possible to increase accommodation for some of the trips.

Poor Response in Apprentice Competition

Speaking to the Institute in general on a serious note, the president said how disappointed he was to find that so far there were only 21 young men entered for the National Foundry Apprentice Competition—from the whole of the country's foundries. (This competition is the eliminating round for the European Competition to be held in Italy in 1962.) So poor was the response to date from over 10,000 circulars that the closing date for receipt of entries was extended to November 7, the president added.

Two photographs taken during the visit to Craven Brothers, Limited. In the upper picture a group of visitors (including at their centre Mr. G. Lambert, the secretary, and Mr. D. A. Richards, the president are inspecting the finishing of a large mould in the main foundry and in the lower picture the construction of a small mould is being discussed in the smaller-casting bay. (Unfortunately in the list of works to be visited published in the JOURNAL *of October 26 the name of Craven Brothers, Limited—which was paired with George Richards & Company, Limited, for the day's tours—was omitted. Apologies are recorded to the firm and to readers.)*



In this photograph the party visiting Associated Electrical Industries (Manchester), Limited, is seen watching molten steel being poured into a mould on a centrifugal-casting table in the special-castings department of the foundry.

From amongst the firms' representatives at the top table, Mr. A. Patterson, works manager, A.E.I. (Manchester), Limited, replied on behalf of the guests. Commenting *inter alia* on Press reports of this country's poor showing in adherence to delivery promises, he said that manufacturers in continental countries were just as bad if not worse than UK firms.

General Comment

The evening was concluded with cabaret entertainment and informal discussions amongst members on what they had seen and heard during the day. Comments, mainly laudatory, were made on the receptions they had received at the various works, varying from the completely formal and highly organized to those where everyone seemed to be on a christian-name basis. A feature at least at one of the receptions at the works was an innovation in the manner of dividing the group of visitors into small parties. This consisted in the handing to each visitor on arrival of a cyclostyled form on which he was asked to indicate first and second choice of group and guide, depending upon his major interests—whether metallurgical, special process, moulding, finishing, coremaking, etc. In this way, an attempt was made to get visitors and guides of kindred interests together and the result was highly gratifying, even to the organizers who had expected possible "plumping" for one or other sections and were agreeably surprised at the balance of choice shown. At this visit, too, maps of the route to be followed were provided for each man on a plan view of the foundries.

In general, good organization by the staff of the host works was commented upon by practically all the visitors and the whole function was once again voted a complete success.

ASHOK LEYLAND, LIMITED, of Madras, has received its first contract from the Andaman Islands for a Leyland Comet vehicle.

Foremen and the Common Market

The foreman remains the final channel through which the management's requirements are made known to the men, said Mr. A. C. Main, chairman of the conference committee of the Engineering Employers' Federation, at the annual dinner of the Foremen and Staff Mutual Benefit Society at the Royal Victoria Hotel, Sheffield, on October 21. The Master Cutler, Mr. Gerard Young, also emphasized the importance of the foreman. He said that the British foreman must be given back, not only his "bowler hat," but all that went with it—authority and prestige. He said, "I remember when the foreman's word was law, and his bowler hat carried the status of a policeman's helmet. Nowadays, the foreman is so hedged around with special functionaries that some men on the workshop floor are unprepared to accept the position."

Mr. Young added, "If Britain is to survive competition in the Common Market, then there must be a rigorous pruning of inefficient men and inefficient managements, and this is where the foreman will be needed." He considered that not only the foremen, but every sane man in Sheffield industry was going to be sharply tested if Britain entered the Common Market." ". . . and I believe we shall and must join the Common Market," he said. "The economic facts are that half the food we live on must be imported, and we must therefore sell abroad half of what we produce. If we do enter the Common Market, we shall have a sharp awakening. If we don't, life will be stiffer still. What will happen if our tariff barriers fall? Shall we be cosy? No, we shall be struggling as we were 30 years ago. One of five of the Sheffield firms who have been prospering for 15 years will be submerged if not extinct, unless we pull our socks up."

The Lord Mayor of Sheffield, Alderman J. W. Sterland, paid tribute to the work of the foreman at shop floor level in solving industrial disputes. He agreed that entry into the Common Market would have its drawbacks, but said the drawbacks of staying out would be even greater.

Others present included Mr. D. Senior, president, Sheffield Chamber of Commerce; Mr. S. B. Rippon, president, Sheffield and District Ironfounders' Association; Mr. Matthew Scougall, secretary; Mr. George Longden; Mr. Cyril Taylor, and Mr. Frank Hepworth.

Industrialist Viewpoint

The majority of industrialists would welcome Britain's entry into the Common Market in the belief that the losses would be overwhelmed by the gains, said Mr. Peter Goldman, a director of the Conservative Political Association when he spoke to the Sheffield Conservative-Liberal Association at the Grand Hotel, Sheffield, on October 22. He said that one of Britain's main problems was her ties with the Commonwealth. "For the entire system of our Commonwealth trade to be suddenly called in for question is a very serious matter. We must negotiate and set our aims at entering the market with safeguards for the Commonwealth." He put aside the argument that if Britain joined in with the other six there would be a large influx of foreign labour. "The number of unemployed persons within the Common Market countries is fairly equally distributed. Italy is the only exception, but the situation there is rapidly changing."

Alderman H. Macdonald Steward, M.P. for Stockport South, criticised recent newspaper publicity on strikes. He said. "We will never improve our position in the world of trade until we get our home picture into a true perspective. We must publicize the better side of our industries rather than the worst."

Dinners

JOINT IRON COUNCIL

A total of over 700 attended the annual banquet of the Joint Iron Council held on Wednesday, November 8, at the Dorchester Hotel, London. Those present consisted mainly of the ironfounders of the country and their guests, together with their major raw-material suppliers (namely, the pig-iron producers), all of whom are organized under the aegis of the JIC. In addition, the function was attended by members of the Press.

The guest of honour was His Excellency the Hon. George Drew, Q.C., High Commissioner for Canada, and after the Loyal Toast, it was he who proposed "The Iron Industry." During his remarks, His Excellency said that iron was still the most precious mineral known to man and it was up to industry to make the most use of it as a foundation of the economic and social structure, and he referred also to the close association of UK and Canada in the iron industry. The response to this toast was ably made by Mr. N. P. Newman, C.B.E., J.P. (president, Joint Iron Council), who took the chair at the function. In his remarks, he said that employers and unions must join in all projects for mutual industrial success and stressed the need for a pioneering spirit. The second toast, to "The Guests," was proposed by Mr. M. M. Hallett (vice-chairman, Council of Ironfoundry Associations) and Sir William McFadzean (chairman, Export Council for Europe) responded. Those listed as being on the top table at the banquet were, in addition to Mr. Newman, Mr. Hallett, Sir William McFadzean and the Hon. George Drew, Mr. Steffen Holmblad (president-elect, European Committee of Foundry Associations), Mr. N. C. Macdiarmid (vice-president, JIC, and chairman, Council of Iron Producers), Mr. M. J. Glenny (chairman, Council of Ironfoundry Associations), Sir Cyril Musgrave, K.C.B. (chairman, Iron and Steel Board), and Mr. F. D. Ley, M.B.E., T.D., D.L., J.P. (deputy chairman, CFA).

INSTITUTE OF BRITISH FOUNDRYMEN

East Anglian Section

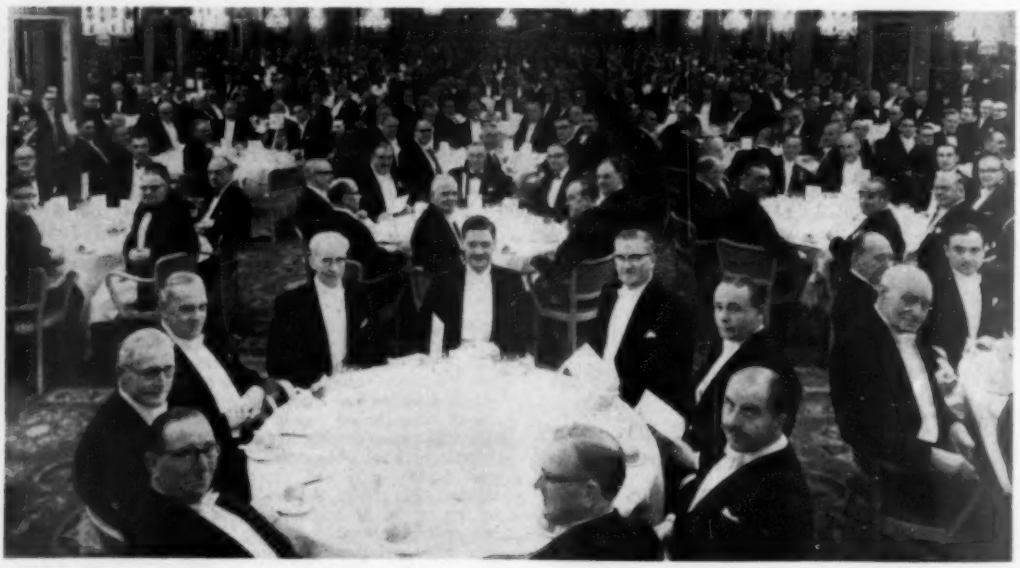
The annual dinner and social evening organized by the East Anglian section of the London branch of the Institute of British Foundrymen, was held on Friday, November 3, at the Oriental Café, Ipswich. There was a record attendance at this year's function, some 750 members and guests being present. Mr. A. R. Parkes, president of the London branch, was the guest of the evening, accompanied by Mr. T. Wills, honorary secretary, London branch. Mr. K. Bolton, the section's president, welcomed the guests, and referred particularly to Mr. F. E. Tibbenham and Mr. J. L. Francis, past-presidents of the East Anglian section, and Mr. D. A. C. Hutchison and Mr. J. Bain, past-president of the London branch, all of whom were present. After dinner, the party was entertained by the Benny Lyon Show—a Norwich concert party—and Mr. L. A. S. Harbourne (junior vice-president of the London branch) undertook the role of toastmaster and compère for the evening in his usual capable manner.

North-east Lancashire Branch

The IBF national president, Mr. D. A. Richards, attended the annual dinner and dance of the North-East Lancashire section held at the White Bull hotel on Saturday, October 28 (the day following IBF National Works Visits in the Lancashire area).

For the small section, the large attendance at the function—over which the section president (Mr. D. Kershaw) presided—was most encouraging and augurs well for the future prosperity of the section's activi-

The illustration below and that on the adjoining page are general views taken from the two ends of the banqueting hall at the Dorchester Hotel, London, during the progress of the annual dinner of the Joint Iron Council, held on November 8.



ties. The arrangements were under the care of the section's enthusiastic honorary secretary, Mr. H. Tattersall. Speeches were confined to a welcome to the national president by the section president and a brief reply by Mr. Richards. Dancing until nearly midnight concluded the evening's enjoyment.

SIMA's Tenth Convention

Export is the theme of the tenth annual conference of the Scientific Instrument Manufacturers' Association, currently being held at the Grand Hotel, Eastbourne. It was opened on Wednesday by Sir Charles Fitton, O.B.E., M.A. (immediate past-president, Institute of Export), supported by Mr. P. B. Kollberg (commercial counsellor, Royal Swedish Embassy), Mr. N. Knowles (commercial attaché, American Embassy), and Mr. G. P. Phillips (special commercial adviser to the High Commissioner for Australia in London). The technical sessions are being held to-day (Thursday) and to-morrow, and on Saturday there will be a forum for all delegates, following the summing-up of the sessions by the respective chairmen.

On Saturday evening, a reception will be held by Mr. A. W. Jones (president, SIMA), and his lady and this will be followed by the formal dinner, with Councillor J. B. Coventry, J.P., the Worshipful Mayor of Eastbourne and the Mayoress, and Miss Patricia Hornsby-Smith, D.B.E., M.P., as guests of honour.

Interesting Example of Foundry Publicity

When one settles down on the terrace of a Continental café, the ambient atmosphere induces a contemplative state of mind. It notes the passing traffic and when at last the coffee arrives, attention passes to the items served. At that moment, visitors to Holland may learn from an advertisement printed on the miniature paper bag containing the sugar that Meehanite is known throughout the world. This is good publicity, especially if the *maitre d'hotel* knows an address where additional information can be obtained.

Birmingham and the Credit Squeeze

At a meeting of the Midland Regional Board for Industry in Birmingham last month, a formal statement to be sent by the Board to the Chancellor of the Exchequer was agreed. It was to urge the Chancellor to consider a relaxation of the credit squeeze and not to leave the brake on the economy too long.

Major C. R. Dibben, chairman of the Board, said that experience had shown the serious effects of failing to take off the brake sufficiently early and that the time lag between relaxation of restrictions and an effective increase in industrial activity makes it imperative that easement should not be delayed until activity has been so reduced as to produce an appreciable degree of unemployment and short-time working.

In a review of trade trends in the Midland region, Major Dibben said that general engineering continues to be busy but in the consumer-goods field, demand remains slack. Firms supplying components to the motor industry are being affected increasingly by the reduced demand. He added that reports received by the Board have confirmed that the optimism about future prospects has lessened and that since the holiday season the number of firms working below capacity has increased. "It may be significant that the number of wholly unemployed adults in the Midland region has increased by 2,660 at a time of the year when there is normally little change," he said.

Mr. C. J. German, Midland Regional Controller of the Ministry of Labour, said that the number of wholly unemployed was 23,445. Also there were about 34,000 workers on short time—22,000 of them in the motor industry although that total included the 7,000 employees of Rootes factories in Coventry temporarily out of work because of the Acton strike. The official unemployment figures in the Midlands now stood at 39,286, the highest since February and most unusually above the national average—1.7 compared with the national average of 1.6 per cent.

Notes from the Branches

Northampton Section

The Northampton section of the Institute of British Foundrymen started its 1961/62 session with a works visit to the Stanton Ironworks Company, Limited, near Nottingham, on Saturday, September 23. Thirty members and guests arrived at Stanton at 10.30 a.m. to visit the new ore-preparation plant and see something of the production of foundry pig-iron. It was essential that the visitors decided on their particular interest because the Stanton Works are so vast and cover so many products that it would be impossible to see everything in one day.

The company, developed from a small ironmaking business over 100 years ago to the present undertaking which employs in total some 10,000 workers, is the largest foundry pig-iron producer and spun-pipe maker in the country. In addition the company produces its own coke and by-products, at the same time supplying up to 24,000,000 cu. ft. of gas daily to the gas grid. Slag from the furnaces is broken into road stone which is either sold dry or mixed with bitumen to form a macadam. Finally, two large iron foundries are operated in which large quantities of pipes, pipe fittings, joint components, tunnel segments and a variety of general engineering castings are produced.

Ironmaking Plant

The two blast-furnace plants, comprised of five modern furnaces, can produce 12,000 tons of iron per week and as this is produced from local ore which is low in iron content, an extensive ore-preparation plant covering 40 acres has been put down to allow the furnaces to obtain optimum results from the available raw materials.

Extensive sidings to hold 700 wagons feed up to 30,000 tons of ore per week to the wagon tippler from which it passes through the crusher house and is reduced to a maximum size of 3 in. After crushing the ore is conveyed to one of four 6,000-ton bedding piles where it is spread in horizontal layers and later reclaimed by vertical slices to obtain a uniform mixture of the various ores coming into the works. After passing through the screening plant where fines below ¼ in. are extracted the ore continues on to the blast-furnaces *via* storage bunkers and conveyors. The fines, however, are taken to the sinter plant stockyard which has a capacity of 80,000 tons and here foreign ore-fines are introduced together with crushed coke.

The mixture is fed to the continuously moving sinter strand, capacity 10,000 tons per week, where the mix is ignited under a gas-fired hood, ignition being supported by a very large extraction fan of 400,000 cu. ft. per min. Hot sinter is dropped from the end of the strand through a breaker and cooler thence to the blast-furnaces where it joins the larger ore.

The whole plant which includes over three miles of conveyors is extremely clean, promoting an air of high efficiency. Very few operators were seen and mechanization was of a high order with extensive instrumentation and electrical-control gear.

The party then moved on to the blast-furnaces at New Works where they were just in time to see a tap. Some members of the section had never seen pig-iron being made before and were therefore fascinated with the whole process which is, of course, very interesting and essentially spectacular.

A most enjoyable luncheon was partaken of in the works canteen where an opportunity was taken for a general discussion with the six guides, and the party was introduced to Mr. E. M. Summers, director and general manager, iron production, who welcomed them very warmly. After luncheon, Mr. Summers gave an hour's talk on the production of pig-iron and answered numerous questions from a very interested and appreciative audience.

Mr. J. W. Deaton, junior vice-president of the section, thanked Mr. Summers and his staff for giving their time and for the excellence of the arrangements. He said how very successful and enjoyable the visit had been and how much he had been impressed with what he had seen which was, after all, only perhaps a quarter of what Stanton had to offer to the visitor.

Australia (Victoria)

The ninth annual convention of the Australia (Victoria) branch, taking place this week at the Royal Melbourne Institute of Technology, was officially opened by the Lord Mayor of Melbourne on Tuesday afternoon. The programme of technical sessions, works visits, sightseeing tours, and social functions culminates with the annual banquet at Union House, University of Melbourne, to-morrow (Friday) evening. This year, Mr. C. H. Wilson, past-president of the Institute of British Foundrymen and a director of Stanton Ironworks Company, Limited, who has already paid two visits to the Australian branch, personally delivered the Tom Makemson Memorial Lecture.

Technical Sessions

On the Tuesday afternoon, following the official opening, the branch held its annual general meeting and the president then delivered his address on "Ornate Iron Castings Around Us." At the evening technical session at the Radio Theatre of the Institute, exchange papers presented were from the New Zealand Institute of Foundrymen on "Small-scale Steelmaking Utilizing New Zealand Ironsands," by Mr. E. Heap; from the Institute of British Foundrymen on "Modern Methods of Coremaking," by Mr. J. D. Berry and Mr. E. C. Toghill, and the Institute of Australian Foundrymen on "Metallurgical Coke from High-volatile Coals by Blending with Inert Additives," by Dr. W. E. Hesp and Dr. D. H. T. Taylor.

Technical sessions listed for Wednesday included an exchange paper from the Institute of Indian Foundrymen; "Introduction to the Costing of Castings," by Mr. R. R. Miller (South Australian Institute of Foundrymen); "Spheroidal-graphite Iron in South Africa," by Mr. D. Gordon Jones (IBF South African branch), and "Preparing Sand by Mouldability Control," by Mr. H. W. Dietert and Mr. A. L. Graham (American Foundrymen's Society). In the evening delegates were assembled in the Royal Society Building for a buffet dinner and later heard Mr. Wilson deliver the Tom Makemson Memorial Lecture.

Scheduled for to-day (Thursday) is a day tour through the picturesque country of the Latrobe Valley to Victoria's brown-coal and electric-power centre, for a visit to the State Electricity Commission's open cut, power-generating stations and workshops at Yallourn and Morwell. To-morrow there will be another works visit, this time to see the pig-iron furnaces and scrap steel baling plant of Albert G. Sims, Limited, at Braybrook.

Also on the works visits programme list were the steel foundries of Davies & Baird Pty., Limited, Brunswick; the Steel Company of Australia, Coburg; the automobile foundries of General Motors Holden, Fishermen's Bend, and Birmid Auto Castings, Geelong.

World Trade Views

Mr. Hugh T. Weeks, a member of the Economic Planning Board, who recently became a director of Hadfields, Limited, Sheffield, proposed the toast of "Sheffield and World Trade" at the annual dinner of Sheffield Chamber of Commerce at the Cutlers' Hall, Sheffield, last month. On world trade, he said the basic idea behind exports was to be able to export enough to be able to import enough—"to maintain a substantially rising standard of living and level of production."

It raised the question whether our production and general standard of living was expanding fast enough. Figures were being publicised that the UK increase was 2 per cent. per annum for the last few years; France nearly 4 per cent. and Germany over 5 per cent. Over a period of time these differences became significant, he said. It meant that at present it was probably true to say that the standard of living in West Germany was equal to that in the UK; that in France the standard of living would probably equal ours within the next five years, possibly less."

Multiplicity of Blame

Among the reasons for this Mr. Weeks suggested various views—that we are not investing enough, or investing in the wrong things, or we have too much protection. Then, "The Government encourages one moment and discourages the next." "Some people say management lacks enterprise. Others that labour and the trade unions exploit a situation in which we have full employment. Some say that we have too many public schoolboys in industry, and others that we have too few graduates."

Referring to the Common Market, he said, "We have to realize that if we enter—and in my view entry is the right course—it is going to mean an extremely competitive world." A planned system of some sort was necessary. Over the last seven or eight years French productivity had increased by about 80 per cent. while British productivity increased by 30 per cent. "The French appear to have done it partly by a planning system in a free economy. I think we can learn something from the French, and even the Japanese. If a plan can be developed not too complex, like early Monnet in style, then it can somehow give us a sense of common purpose, to which we can all look forward."

Tube Investments Research Developments

Continued growth in specialized fields has called for an expansion of the research and development organization of Tube Investments, Limited, under the direction of Dr. J. M. Kay, whose appointment to the board was announced in April.

The central TI organization will consist of a newly-formed engineering development design office, concerned with advancing the specialized engineering of process plant; the metallurgical research laboratory at Hinxton Hall, near Cambridge, concerned with physical metallurgy and metal physics; and a department of technical information in Birmingham.

Organizations for the three main metal-processing divisions are:—a new iron and steel research and development department, with headquarters at Rotherham; a new organization for the steel tube division, which will be developed from the TI technological centre at Walsall; and the British Aluminium laboratory, at Gerrards Cross, Bucks, which will continue to follow research and development on the manufacture and use of aluminium and aluminium alloys.

Call for More Factory Inspectors

Last week the Minister of Labour received a deputation from the Trades Union Council on the need for an increase in the number of H.M. Factory Inspectors. The TUC was represented by Mr. H. Collison, chairman of the TUC's social insurance committee, and Mr. C. R. Dale, who expressed their concern at the rise in the number of industrial accidents in 1960. They referred to the increase in the work-load of the Factory Inspectorate over the last 30 years, repeated their view that the increase in establishment following the 1956 White Paper was inadequate, and argued the need for workplaces to be inspected more frequently. In view of these factors, they urged that there should now be a substantial increase in the size of the Inspectorate.

The Minister recalled that there had been a substantial increase in the size of the Factory Inspectorate in recent years and referred to recent organizational changes designed to make the fullest use of trained inspectors. He said that the size of the inspectorate was kept regularly under review in relation to the tasks laid upon it and undertook that the points made by the TUC would be taken fully into account.

The Minister said he fully shared the TUC's concern at the rise in accidents. Many accidents, however, were caused by simple causes like clumsy handling, tripping and falling articles. Sixty-five per cent. of accidents in 1960 arose from five such simple causes and they must be tackled by industry. He stressed the importance of greater voluntary activity by both sides of industry and referred to the steps he was taking to stimulate this.

More Exports to Canada?

Members of the Federation of British Industries and of the National Union of Manufacturers, at a meeting in Birmingham, were urged by Mr. John L. Bonus, general manager of the Canadian Association of British Manufacturers and Agencies, to devote more time and energy to exporting to Canada. "In the last two or three years we have had fewer British manufacturers coming to Canada. The impression has been created that British industry is losing interest in the Canadian market," he said.

Sales to Canada could be improved in every field, he continued. In the first six months of this year 17,000,000 Canadians bought £120,000,000 worth of British goods—this was four times as great per head as British sales in the Common Market. The Canadians were looking always for new technologies, and British manufacturers, who are in the forefront of technological progress, could compete favourably with Americans. There was especially good opportunity for small manufacturers, particularly those which had a good product which they had never tried to export. There must be many such firms in the Midlands, be added.

Printing Machinery Exhibition

As a result of co-operative arrangements between the Association of British Manufacturers of Printers' Machinery and the Association of Printing Machinery Importers, the 11th International Printing Machinery and Allied Trades' Exhibition (July 16 to 27, 1963) will now occupy both Olympia and Earls Court. Space bookings are now being made by the organizers, F. W. Bridges & Sons, Limited, Grand Buildings, Trafalgar Square, London, W.C.2.

Personal

Mr. E. VAN RIJ has been appointed a director of the Premier Metal Company of South Africa.

Mr. JAMES JACK has been appointed a director of Darlington and Simpson Rolling Mills, Limited.

Mr. LESLIE DAVIES has been appointed to the board of Pulsometer Pumps, Limited, of Reading, as works director.

Mr. GORDON SINGLETON has left the General Electric Company, Limited, to join the board of S.L.R. Electric, Limited.

Mr. D. M. BLACKWELL has been co-opted as an additional director of Fairbairn Lawson Combe Barbour, Limited.

Mr. MAURICE WRIGHT has been elected a director of Dunford & Elliott (Sheffield), Limited, steel manufacturers, Sheffield.

Mr. R. E. FISCHBACHER has been appointed an assistant director of British Scientific Instrument Research Association.

Mr. R. E. ANSELL has been appointed sales director, and Mr. C. BOWLES, sales manager, of Henry Wiggin & Company, Limited, London, S.W.1.

Mr. W. HALLIDAY, chief scientist of the Kelvin Hughes division of S. Smith & Sons (England), Limited, has been appointed a director of the division.

Mr. J. C. GLADMAN has been appointed manager of the computer engineering department, A.E.I. Limited's Electronic Apparatus division, Trafford Park.

Mr. LEONARD W. GUMMER, joint managing director of Gummers, Limited, valve manufacturers, Rotherham, will shortly be retiring from the board.

Mr. B. SMITH has been appointed a director of Osborn-Mushet Tools, Limited, Sheffield, an associate company of Samuel Osborn & Company, Limited.

Mr. J. B. H. JACKSON has been appointed an additional director of Ada (Halifax), Limited, machine-tool manufacturers, West Mount Works, Halifax, Yorkshire.

Mr. S. C. LLOYD of Brockhouse Trading Facilities, Limited, the Brockhouse group's export confirming house, left for a three-week tour of Greece and Yugoslavia at the end of last month.

Dr. WILLIAM WHITE EASTON, formerly principal of the technical college at Dounreay atomic establishment, has now taken up his appointment as principal of the Falkirk Technical College.

Mr. DOUGLAS G. OGILVIE, managing director of Hawthorn Leslie (Engineers), Limited, Newcastle-on-Tyne, has been elected chairman of the National Association of Marine Enginebuilders.

Mr. D. WAELES, who is well known for his work on the training and education of foundry personnel, has been awarded the Gold Medal for Technical Training by the French Ministry of Education.

Mr. RALPH CHILES, chairman of Prince-Smith & Stells, Limited, has joined the board of Textile Machinery Makers, Limited. Both companies are members of the Stone-Platt Industries group.

Mr. HERBERT STONE has been appointed works manager of Markham & Company, Limited, mechanical constructional engineers, of Chesterfield. He had been associated with the company for nearly 40 years.

Mr. P. E. MILLINGTON has been appointed sales manager of the Aston Brass Company, Limited, brassfounders, Erdington, Birmingham, a subsidiary of the Valor Company, Limited, Valor Works, Birmingham.

Mr. C. J. EVANS, at present sales manager of the furnace department of the General Electric Company, Limited, will take up the appointment of southern area sales manager of Efco Furnaces, Limited, on December 1.

Special director and manager of the Star Aluminium Company, Limited, of Wolverhampton, Mr. W. K. ALTWEGG has returned after a world sales tour that embraced New York, San Francisco, Honolulu, Sydney, Melbourne, Singapore, Rome and Paris.

Mr. NIGEL J. BENNETT has been appointed special overseas representative of the board of Tecalemit, Limited. He will be making extended overseas tours commencing with India and Australia. He will continue as managing director of British Filters, Limited.

Mr. JOHN O'NEILL, head of the mechanical engineering department of Rotherham College of Technology for the past two years, has been appointed vice-principal of the Derby and District College of Technology, and will take up the appointment at the end of the year.

LORD PIERCY has been re-elected president for the ninth successive year at the first meeting of the newly-elected Council of the Institution of Works Managers. The outgoing chairman, Mr. A. M. HUDSON-DAVIES, is succeeded by Mr. JOHN AYRES, managing director Simms Motor Units, Limited.

Mr. G. B. R. FEILDEN has resigned his present directorships in order to join the board of Davy-Ashmore, Limited, as technical director on December 4. Mr. Feilden will be based at the group's London headquarters at 15, Portland Place, W.1, and will also be joining the boards of the principal operating companies of the Davy-Ashmore group.

Mr. EDWARD ALSBURY, salaries paymaster at Rolls-Royce, Limited, Derby, who has completed 51 years' service with the company, and who retires shortly, was presented with an automatic tea-making set by Mr. W. T. Gill, financial director, in appreciation of his services. Mr. Alsbury joined the firm in 1910 and was office boy to Mr. John De Looze, the company's first secretary.

Mr. EDWARD ELLIOTT has been appointed managing director of Willan & Dickinson, Limited, Phoenix Ironworks, Blackburn, a subsidiary of R. & J. Dick, Limited, power-transmission engineers, Glasgow. He succeeds Mr. J. MARSDEN, who resigned through ill-health in March. Also a director of L. Sterne & Company, Limited, refrigeration engineers, Mr. Elliott joined the Willan & Dickinson board in January.

Mr. F. BRIAN HOLMES, chairman and managing director of W. C. Holmes & Company, Limited, has retired as managing director. He will continue as chairman of the company and of the holding company, B.H.D. Engineers, Limited, and of the member companies of which he is at present chairman. Mr. A. J. M. HENSHAW succeeds Mr. Holmes as managing director. Dr. W. T. COSBY has joined the board.

Two new directors who have been appointed to the board of Stanley Works (G.B.), Limited, tool manufacturers, Sheffield, are Mr. ARTHUR G. JONES, general works manager, who has been appointed works director, and Mr. WILLIAM R. MILLS, general sales manager, appointed sales director. Mr. WARWICK M. DINGLEY has relinquished his seat on the board in view of his increasing commitments as director of marketing in Europe for the Stanley international organization.

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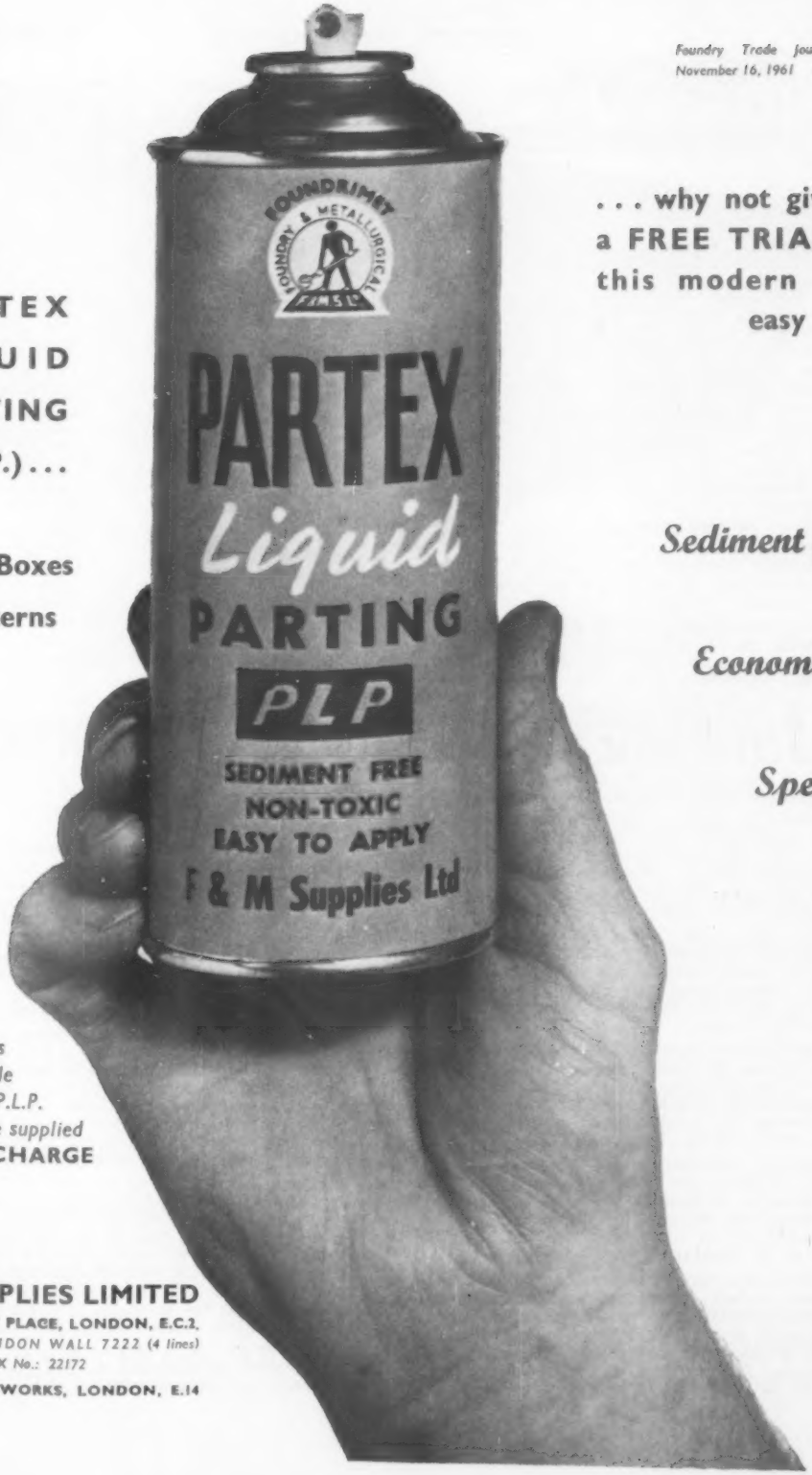

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News in Brief

THE TELEPHONE NUMBER of Bowthorpe Holdings, Limited, Crawley, Sussex, has been changed to Crawley 28888.

ATCO MOTOR MOWERS, LIMITED, have opened a new service depot in Rotherham Road, Eckington, near Sheffield.

DUSTRACTION, LIMITED, have now occupied their new offices and works at Mandervell Road, Oadby, Leicestershire.

DELORO STELLITE, LIMITED, manufacturers of heat-, abrasion-, and corrosion-resistant alloys, have moved to Stratton St. Margaret, Swindon, Wilts.

THE DATES of the autumn congress of the *Bureau International de la Récupération* to be held in Amsterdam have been changed to November 23 and 24, 1961.

THE 11 NEW MEMBERS of the "25 Club" of James Neill & Company, Limited, Sheffield, were each presented with a gold watch by Sir Frederick Neill, managing director, at the Club's 15th annual dinner last month.

FIRTH VICKERS STAINLESS STEEL, LIMITED, has donated the reflector in the centre of the new fountain in Sheffield Town Hall Square, given to the city by Sir Stuart and Lady Goodwin, and which is to be named the "Goodwin Fountain."

BUILT and equipped in three years at a cost of nearly £200,000, the Central Research Department of British Ropes, Limited, Doncaster, was opened on October 27 by Mr. Niall Macpherson, M.P., Parliamentary Secretary to the Board of Trade.

A TOUR OF THIS COUNTRY by Professor G. M. Pezopoulos, Director of the Greek Public Power Operation, at the invitation of the Board of Trade, included a visit to the diesel-engine and electrical power-plant installations of Ruston & Hornsby, Limited, at Lincoln.

ACME CONVEYORS, LIMITED, announce that they are now members of the Fletcher Houston group, and their new address is Dawley Brook Works, Kingswinford, Staffordshire. (Telephone: Kingswinford 3301-3.) The Glasgow office remains at 58/62, Seaward Street, Glasgow, S.1.

THE FIRST TWO 30-TON EXCAVATORS made under licence to an American firm by Babcock & Wilcox, Limited, recently left the firm's Dalmuir Works, Clydebank. The company is only the second in Britain making large-scale excavators. They are building one weighing 90 tons.

THE BRITISH INSTITUTE OF MANAGEMENT, Management House, 80, Fetter Lane, London, E.C.4, is holding a "Shorter Working Week" conference at the Connaught Rooms, London, W.C.2, opening at 10 a.m. on November 28. Further information is available from the above address.

BRITISH INDUSTRIAL SAND, LIMITED, announce that their northern area sales office is moving to larger premises at 42, Moseley Street, Newcastle. Mr. B. J. Kirkman, the manager for the area, is also to take responsibility for Lancashire. He will be assisted by Mr. R. W. Scott as technical representative.

MORE MANUFACTURING CAPACITY for Sofono electric heaters is being introduced at Federated Foundries' Grange-Camelon Ironworks, Falkirk, because of a big increase in demand for the company's products, notably the Sofono-flame coal-effect fires introduced this autumn. New production lines are being laid down at the factory, which is working to full capacity.

AEI-BIRLEC, LIMITED, of Birmingham, have received an order for furnaces from Centrozap of Poland to the value of £153,000. The contract calls for the supply of two continuous twin-track, gas-fired gas-carburizing furnaces, each to give an output of 300 kgs per hour. They will be used chiefly for the heat-treatment of gears and other components required in the manufacture of tractors.

CENSUS OF PRODUCTION to be taken in 1962 for the year 1961 will be a sample inquiry and the questions asked will relate only to sales and work done, capital expenditure, and stocks and work in progress, states the Board of Trade. Firms will also be required to give details of their sales direct to the public. Undertakings producing coal, gas, and electricity are exempt from the census.

THE No. 3 blast-furnace at the Clay Lane Ironworks of Dorman Long (Steel) Limited, has produced two million tons of basic iron since it was brought into commission in December, 1956. This is claimed to be a record tonnage from the larger blast-furnaces now operating in this country. The furnace is still in commission and will continue into 1962 before re-lining becomes necessary.

A PRESS RELEASE from the Battelle Memorial Institute, Columbus, Ohio, states that "If research were considered an industry, its total 'sales' would rank it about midway among the 20 major manufacturing industries in the United States. Approximately 350,000 professional people are employed in research to-day, a number equal to just under one-half of the total production employees of the automobile industries."

DISTINGTON ENGINEERING COMPANY, LIMITED, of Workington, Cumberland, a subsidiary of United Steel Companies, Limited, are to build a vertical continuous-casting plant for steel billets for Scaw Metals, Limited, of Johannesburg, South Africa. The plant will be built in conjunction with Concast AG of Zurich, Distington's associate in the field of continuous casting, and is subject to final agreement of technical details.

A NEW TYPE of fuel-saving equipment, the first in a British ship, is to be installed in the tanker British Kestrel, of 15,500 tons d.w., which was launched on October 27 by William Hamilton & Company, Limited, Port Glasgow. Waste gases from the main diesel-engine, being built by John G. Kincaid & Company, Limited, Greenock, will provide enough power and heat to meet all the requirements of the ship's electrical and heating services at sea.

AEROGRAPH-DEVILBISS COMPANY, LIMITED—manufacturers of spray-painting and finishing equipment—have moved from the premises at Lower Sydenham to a new and larger factory recently built at West Howe, Bournemouth. The company's head office, sales division and export department have also been transferred to Bournemouth, but the existing sales division at 47, Holborn Viaduct, London, E.C.1, will continue to handle all business in London and the Home Counties.

A NEW COMPANY under the title of Energy Conversion, Limited, to promote research into the development of fuel cells which can be produced commercially, is to be formed by three leading British companies—British Petroleum Company, Limited, British Ropes, Limited, and G.K.N. Steel Company, Limited, in association with the National Research Development Corporation. The new company, in which all four parties have an equal share, has an authorized capital of £200,000.

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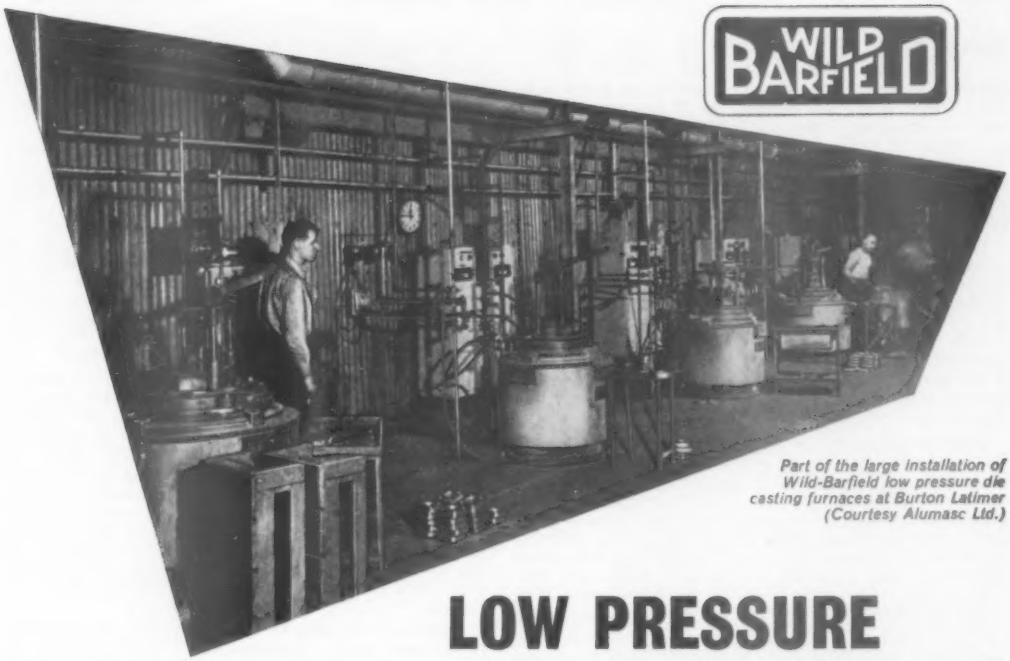

Part of the large installation of Wild-Barfield low pressure die casting furnaces at Burton Latimer (Courtesy Alumasc Ltd.)

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News in Brief

Industries Association, will take place in the Edinburgh Suite, Belle Vue, Manchester, on November 21, and will be opened at 11.30 a.m. by Mr. H. Cobden Turner, J.P. Some 55 firms will be taking part, their displays covering a wide field of engineering products—including models, photographs and samples—ranging from small specialized components to large machines and equipment.

NEW OFFICE ACCOMMODATION to house the Ruston group's London staff has been acquired in Berkeley Square House, Mayfair, London, W.1. The new premises will be the focal point of the London activities of the Ruston Paxman sales division. The office will be controlled by Mr. T. L. Kendall, who has been appointed executive director, resident in London; Mr. J. G. Barber has been appointed export area manager, eastern *bloc* countries, and is succeeded by Mr. L. J. Lawrence as office manager.

SHEFFIELD AND DISTRICT INDUSTRIAL FIRE BRIGADES' ASSOCIATION should have a different title, declared Mr. Ben Jones, Chief Fire Officer for Sheffield, at the Association's annual dinner last month. The present name deterred firms who might otherwise join, and a better one would be the "Sheffield and District Industrial Fire Prevention Association." There were firms in the city who had no fire prevention unit, and they should have one. He was sure a change in title would encourage more firms to join the Association.

THE CENTRAL ELECTRICITY GENERATING BOARD has announced that they have received consent from the Minister of Power for construction of the second of the two large new power-stations it is planned to build in the West Riding. The new station on the River Aire at Eggborough, will have a capacity of 2,000 mw., the same as at the new Ferrybridge and West Burton power-stations. Work is expected to begin early next year and the first unit is planned to be commissioned in 1966. Both Ferrybridge and Eggborough will each burn over 5,000,000 tons of coal a year.

BROWN BAYLEY STEELS, LIMITED, Sheffield, have placed a contract worth about £800,000 with the Brightside Foundry and Engineering Company, Limited, of Sheffield, for a 32-in. blooming mill and the reconstruction of the present 28-in. finishing mill at the Attercliffe Works of Brown Bayley. This order is the main feature of a £2,000,000 development scheme. Its completion will mean that a new melting plant, a new forge—with a 1,500-ton press—and a new rolling mill, will have been completed at Brown Bayley's within 10 years.

HONEYWELL CONTROLS, LIMITED, hope to move during the Christmas and New Year holidays all their components machine-shops and administration offices into the building previously occupied by Wm. Hollins & Company, at Newhouse industrial estate, Lanarkshire. The building is adjacent to the present plant, and will add a further 300,000 sq. ft. to the present 220,000 sq. ft. Final negotiations are proceeding with the BoT and Scottish Industrial Estates management corporation. The taking-over of these premises means that plans to erect new buildings will not now be necessary.

JOHN THOMPSON, LIMITED, of Leeds and Wolverhampton, received 150 inquiries for their industrial steam-raising units as a result of their display at the Northern Exhibition of Fuel and Power for Industry at the Queen's Hall, Leeds, which ended on October 27. The inquiries have come from Turkey, Norway, Ghana and Malaya, as well as this country. The firm also sold a coal-fired boiler to the NCB, and has prospects of an order worth £60,000 from a Yorkshire firm. Babcock & Wilcox, Limited, sold steam-raising plant to a large bakery organization at Mansfield, Nottinghamshire, from the exhibition.

WELLMAN SMITH OWEN ENGINEERING CORPORATION, LIMITED, report a recent large influx of orders for heavy-duty cranes and special steelworks handling machines to a total value of over £1,500,000. The orders include five ladle cranes, ranging from 100/15 tons capacity, and a 200-ton Goliath crane, all of them for British steelworks schemes. The Corporation also reports a large increase in the demand for its mobile forging manipulators and mobile charging machines, especially from overseas. Further export orders have recently been booked from Australia, France, Czechoslovakia, Spain, Sweden and Japan.

AS THE ELECTRIC CONSTRUCTION COMPANY, LIMITED, of Bushbury, Wolverhampton, no longer has need of additional foundry capacity, it has disposed of the business of Tyseley Foundry, Limited, which it purchased in 1946 to remove a bottleneck in the supply of standard castings to its main works. Recently increased production facilities at Bushbury have enabled Tyseley Foundry to concentrate on supplying castings for the machine-tool, motor and allied trades. It will continue to trade under its present name under the direction of Mr. E. G. Evans, foundry manager during ECC ownership. Mr. Evans has taken into partnership Mr. P. G. Rogers.

BUSINESS DECLARED by the Export Credits Guarantee Department under "commercial" insurance during the third quarter of 1961 was, at £190,500,000, a record for the quarter, compared with £180,200,000 in the same quarter last year, and £1,300,000 higher than that for the previous quarter. Both the number and value of comprehensive policies increased during the quarter, showing an increase over the past 12 months of some 20 per cent. by value from £699,300,000 to £835,400,000, and in number by 605 policies. During the quarter nine new comprehensive policies were issued for individual annual export turnovers in excess of £1,000,000.

BOARD OF TRADE FIGURES published recently show that British/East German trade (including re-exports) for the first nine months of 1961 totalled £12,783,486, more than £1,500,000 above the figure for the same period of 1960 and more than £6,500,000 above that for 1959. British exports to East Germany at September 30 totalled £5,932,508, compared with £5,533,682 in 1960 and £2,155,039 in 1959. Re-exports for this period in 1961 totalled £1,598,776, compared with £855,801 in 1960 and £572,344 in 1959. Imports into Britain from East Germany at September 30, totalled £5,252,202 compared with £4,694,138 in 1960 and £3,423,611 in 1959.

ONE HUNDRED AND FIFTY-SIX JUNIOR EMPLOYEES of the Staveley Iron & Chemical Company, Limited, and the Sheepbridge Company, Limited, Chesterfield, Derbyshire, who had passed examinations in 28 different subjects, were guests at a presentation of awards and a supper at the end of October. The awards were presented to successful students by the chairman of the company, Mr. S. W. Martin, and the principal speaker was the new managing director, Mr. N. C. Macdiarmid, a member of the Iron and Steel Board. Official guests, who were welcomed by the deputy managing director, Mr. W. N. Menzies-Wilson, included senior officials of the Ministry of Labour and National Service, principals of local colleges of technology and representatives of local authorities of the district.

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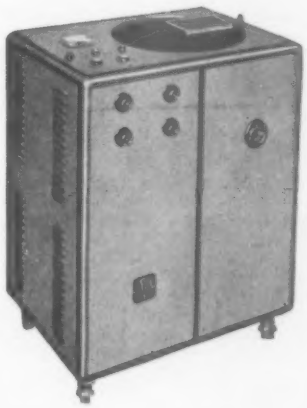

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Raw Material Markets

Iron and Steel

Production of all grades of pig-iron continues ahead of demand and most makers have tonnages to spare. Outputs of basic pig-iron are on a much reduced scale and, although some furnaces are closed and those now burdened for this iron are working below capacity levels, available supplies are more than adequate for both consumption and stock. Consignments continue to be shipped abroad.

The foundries using the low phosphorus irons are relatively the largest buyers, and in most brands of this iron producers could step up deliveries appreciably. Hematite and refined irons are in good supply and high phosphorus iron, for which the demand continues moderate, is also freely available. Forward buying is scarce; in fact the easy supply position does not warrant the building up of stocks at the foundries, as they are aware that advance notice would be given to them of any change in the supply position.

Taking the trade as a whole there is little change in the position at the iron foundries. Those connected with the machine tool trade are receiving good support and regular business is forthcoming from other users of high duty castings, although this is for quantities below previous levels.

The light foundries supplying to the domestic utensil trade are experiencing some improvement in demand, and builders castings are in fairly good request.

There is little if any change in the trading position at the re-rollers. The call for most of their products is moderate and outputs of small bars, light sections, etc., are at reduced levels. Demand for reinforcing rods is fairly good. On account of the reduced consumption of steel semis, orders now being placed with home steelworks are scarce. Plentiful supplies of mild steel semis are available, and the supply of carbon and alloy steels is much easier. Arisings at the steelworks of suitable defectives and crops continue to be accepted by the re-rollers.

Non-ferrous Metals

Conflicting reports from Chile as to whether negotiations had or had not broken down over the renewal of labour contracts governed the copper market in London last week. The acceptance of wage awards and, therefore, peace on the labour front, resulted in the London quotation dropping by four points down to around £228 a ton. In the US the market is quiet with merchant copper being available at 30½ cents, compared with the price quoted by producers and custom smelters of 31 cents a pound. The intake price for scrap by the custom smelters has, however, dropped to 24½ cents a pound which is too low to maintain the price of 31 cents a pound for very long.

Tin has been under the influence of the sale by GSA of 850 long tons of Grade A and B tin. The sale was by tender and it transpired that only 150 long tons of Grade B tin were sold at a price of $1.20 a pound, the remainder of the bids being considered too low. Demand in London, in New York and on the Continent has been lacking and the price has been fluctuating either side of £970 a ton. In the US the price is holding fairly steady around $1.23 a pound. On the other hand, Singapore turned strong after the results of the GSA tender became known and the Eastern quotation recovered earlier losses.

Lead in London is flat and unable to muster any resistance to the steady selling pressure. Accordingly the price has gone below £60 a ton to its lowest level once more for 15 years. In the US the market is also without feature and the quotation is unchanged at 10½ cents a pound.

Zinc in London attracted a lot of attention last week as the price touched a three-year low at £68 5s. 8d. a ton. This was due largely to the arrival of Russian metal on a market which is, in any case, suffering from the lack of demand. In the US the market is quiet with the quotation unaltered at 11½ cents a pound.

Changes in BSI Structure

Changes are announced within the technical directorate of the British Standards Institution to enable it more efficiently to meet a rising demand for standards from an ever-widening circle of interests and to cope with the greatly increasing weight of international standards work.

Hitherto, BSI's technical work has been handled internally within five sections. Now, the number of sections is increased to seven—the two new ones being concerned with (a) metallurgical and some engineering industries and (b) safety and consumer standards; codes of practice work is now combined with building activities.

Staff Changes

Mr. Gordon Weston, BSI's technical director, has been appointed associate director of the Institution. Dr. H. M. Glass, deputy technical director, becomes technical director. Mr. J. F. Stanley, previously divisional chief technical officer for electrical and related projects, is appointed deputy technical director (electrical). Professor C. A. Geneve, divisional chief technical officer in charge of codes, personal safety, metallurgical and other standards work, is now appointed technical adviser (special duties) and he will be primarily concerned with developing standards projects for refrigeration, shipbuilding and structural work.

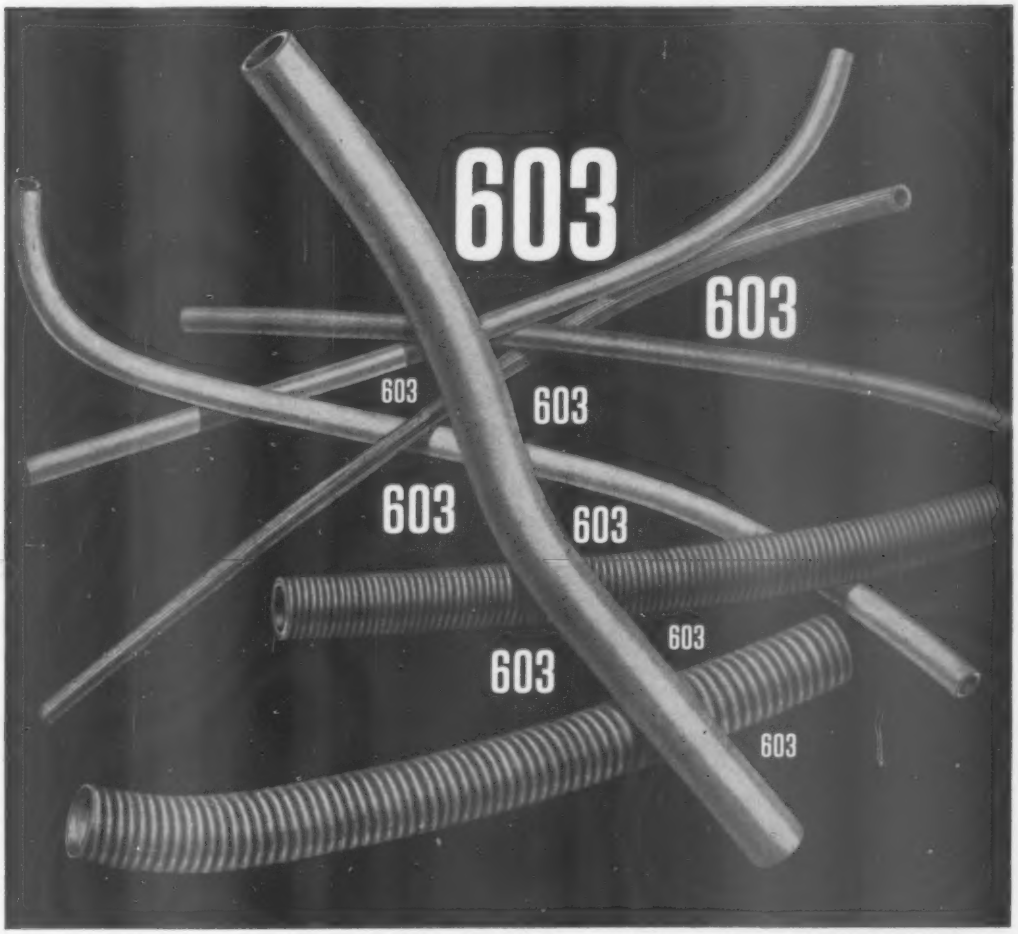
Five former senior technical officers promoted to divisional chief technical officers with responsibility for one of BSI's main channels of work are Mr. R. Berry, Mr. P. Bingley, Mr. J. Brown, Mr. R. A. McKinstry and Mr. A. F. B. Nall.

Industrial Film

The industrial film, "The Way of King's," was shown for the first time last Thursday afternoon to a Press gathering in London. Demonstrating the application of the mechanical handling equipment of Geo. W. King, Limited, Stevenage, Herts, to three diverse types of installation, the film emphasized the rôle of mechanical handling as an integral part of continuous production processes. A descriptive brochure distributed to the audience illustrated a foundry application at the works of R. A. Lister & Company, Limited, where a heavy-duty overhead-rail type conveyor is depicted carrying iron castings to the fettling department.

Engineering Materials & Design Exhibition

At the Engineering Materials and Design Exhibition currently being held at Earls Court, London, S. Russell & Sons, Limited (*stand F.18*), are displaying a number of very interesting castings produced in various special grades of cast iron. This company is one of the leading specialist founders producing spheroidal-graphite, high-duty, heat-, wear- and corrosion-resisting castings. Among the exhibits will be an eight-cylinder diesel-engine crankcase in s.-g. iron and a large conveyor worm in s.-g. Ni-Resist iron. Fully-qualified technicians will be available on the stand to discuss design and uses of cast iron.



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Current Prices of Iron, Steel, and Non-ferrous Metals

(Basis prices, delivered unless otherwise stated. Prices following side headings marked* are subject to an increase of 1 per cent. under Iron and Steel Board Price Determination, 1961, No. 2.)

November 15, 1961

PIG-IRON

* **Foundry Iron.**—No. 3 IRON, CLASS 2, 10-ton lots or over, Middlesbrough, £21 17s. 0d.; Birmingham, £21 9s. 3d.

* **Low-phosphorus Iron.**—Over 0.10 to 0.40 per cent. P, 10-ton lots or over, £23 5s. 0d., delivered Birmingham; £23 10s. 0d., delivered Grangemouth.

Cylinder and Refined Irons.—North Zone, £25 6s. 6d.; South Zone, £25 9s. 0d.

Refined Malleable.—P, 0.10 per cent. max.; North Zone, £26 6s. 6d.; South Zone, £26 9s. 0d.

* **Hematite.**—Si less than 2 per cent, S. & P. over 0.03 to 0.05 per cent., 10-ton lots or over: N.-E. of England (local iron), £23 19s. 0d.; Scotland (Scotch iron), Zone S.1, £24 5s. 6d.; Sheffield, £25 9s. 0d.; Birmingham, £25 13s. 0d.; South Wales (Welsh iron), £23 19s. 0d.

* **Basic Pig-iron.**—£20 3s. 0d., delivered Staffs, Derbyshire, Notts, Lincs, Rutland, Northants, and Leicestershire in 10-ton lots or over.

FERRO-ALLOYS

(per ton unless otherwise stated, delivered)

Ferro-Silicon (6-ton lots and over).—45 per cent. Si, £45 0s. 0d. to £48 0s. 0d., scale 15s. 0d. per unit, lumpy, 75 per cent. Si, £62 10s. 0d. to £66 10s. 0d., scale 15s. 0d. per unit, lumpy.

Ferro-vanadium.—50/60 per cent., 22s. 6d. per lb. of V.

Ferro-molybdenum.—65/70 per cent., carbon-free, 14s.1d. per lb. of Mo

Ferro-titanium.—20/25 per cent., 2-3 per cent. Cu, £250 0s. 0d.; 38/40 per cent., commercially carbon-free, £287 0s. 0d.

Ferro-tungsten.—80/85 per cent., 9s. 1d. per lb. of W.

Tungsten Metal Powder.—98/99 per cent., 12s. 1d. per lb. of W.

Ferro-chrome (6-ton lots and over, lumpy).—4/6 per cent. C, £80 10s. 0d. to £84 10s. 0d., basis 60 per cent. Cr scale 27s. 0d. to 28s. 6d. per unit; over 6 per cent. C, £79 0s. 0d. to £82 10s. 0d., basis 60 per cent. Cr, scale, 27s. 0d. to 28s. 6d. per unit; 2 per cent. C,* 1s. 8d. to 1s. 11d. per lb. Cr; 1 per cent. C,* 1s. 8d. to 1s. 11½d. per lb. Cr; 0.15 per cent. C,* 1s. 9½d. to 2s. 0½d. per lb. Cr.; 0.10 per cent. C,* 1s. 9½d. to 2s. 0½d. per lb. Cr; 0.06 per cent. C,* 1s. 10½d. to 2s. 1d. per lb. Cr. * Average 68-70 per cent.

Metallic Chromium.—98/99 per cent., 6s. 9d. per lb.

Metallic Manganese.—94/96 per cent., carbon-free, £275 0s. 0d.; 96/98 per cent., £285 0s. 0d.

Ferro-columbium.—65/67 per cent. Cb + Ta, 19s. 0d. per lb., Cb + Ta.

Ferro-manganese (Standard).—78 per cent., £58 10s. 0d.

SEMI-FINISHED STEEL

* **Re-rolling Billets, Blooms, and Slabs.**—BASIC: Soft u.t., 100 tons and over, £31 15s. 6d.; tested, 0.08 to 0.33 per cent. C, 100 tons and over, £32 5s. 6d.; hard (0.41 to 0.60 per cent. C), 50 tons and over, £33 17s. 0d.; silico-manganese, 50 tons and over, £42 16s. 6d.; free-cutting, 50 tons and over, £35 4s. 6d. SIEMENS MARTIN ACID (50 tons and over): Up to 0.25 per cent. C; £40 11s. 0d.; silico-manganese, £43 4s. 0d.

* **Billets, Blooms, and Slabs for Forging and for Stamping** 50 tons and over).—BASIC: Soft, up to 0.33 per cent. C, £37 0s. 0d.; basic, hard, over 0.41 up to 0.60 per cent. C, £38 2s. 6d.; acid, up to 0.25 per cent. C, £41 14s. 0d.

FINISHED STEEL

* **Heavy Plates and Sections** (50 tons and over).—Ship plate (N.-E. Coast), £40 7s. 0d.; boiler plates (N.-E. Coast), £42 17s. 0d.; floor plates (N.-E. Coast), £41 16s. 0d.; angles (N.-E. Coast), £38 1s. 6d.; joists (N.-E. Coast), £37 17s. 6d.

* **Small Bars, Sheets, etc.**—Rounds and squares, under 3 in., and flats 5 in. wide and under, untested soft basic, 50 tons and over, £39 1s. 0d.; under 10 tons to 4 tons, £40 18s. 6d.; under 4 tons to 2 tons, £41 3s. 6d.; hoop and strip, coils, 100 tons and over, £38 0s. 0d.; uncoated strip mill coils, hot rolled, under 3 mm. to 12g., 25 tons to under 50 tons, £43 16s. 0d.; black sheets (hand mill), 24g., 10 tons and over, £57 14s. 6d.; galvanized corrugated sheets, 24g., 10 tons and over, £67 4s. 0d.

Alloy Steel Bars.—1 in. dia. and up: Nickel, £67 16s. 0d.; nickel-chrome, £100 18s. 0d.; nickel-chrome-molybdenum, £113 11s. 0d., in lots of 25 tons and over.

NON-FERROUS METALS

Copper.—Cash, £229 5s. 0d. to £229 10s. 0d.; three months, £228 15s. 0d. to £229 0s. 0d.; settlement, £229 0s. 0d.

Copper, Tubes, etc.—Solid-drawn tubes, 2s. 2¼d. per lb. rods, 247s. 0d. per cwt. basis; 20 s.w.g., 382s. 0d. per cwt.

Tin.—Cash, £961 0s. 0d. to £962 0s. 0d.; three months £968 0s. 0d. to £968 10s. 0d.; settlement, £962 0s. 0d.

Lead (Refined Pig).—First half November, £58 10s. 0d. to £58 12s. 6d.; first half February £59 15s. 0d. to £60 0s. 0d. settlement, £58 12s. 6d.

Zinc.—First half November, £68 10s. 0d. to £68 12s. 6d.; first half February, £69 15s. 0d. to £69 17s. 6d.; settlement: £68 12s. 6d.

Zinc Sheets etc.—Sheets, 15g. and thicker, all English destinations, £106 15s. 0d.,, rolled zinc (boiler plates), all English destinations, £104 10s. 0d.; zinc oxide (Red Seal); d/d buyers' premises, £87 10s. 0d.

Brass Tubes, etc.—Solid-drawn tubes 1s. 9¼d. per lb.; sheets to 10 w.g., 195s. 6d. per cwt.; wire, 2s. 8¾d.; rolled metal, 195s. 6d. per cwt.

Brass (Brazing).—BS1400, SCB2, £175; SCB3, £172.

Brass (High Tensile).—BS1400, HTB1, £192; HTB2 £211; HTB3, £227.

Gunmetal.—BS1400, LG2, £208; LG3, £219; G1, 1½% £279; G1 ½% £293.

Phosphor Bronze.—BS1400, PB1 (AID released), £312; PB4 £299; BS1400, 90/10/1%, £298.

Leaded Phosphor Bronze.—BS1400, LPB1, £233.

Phosphor Bronze Strip, etc.—Strip, 300s. 3d. per cwt.; wire, 4s. 2¼d. per lb.; rods, 3s. 5¼d.; tubes, 3s. 5¼d.; chill cast bars, solids 3s. 5¾d.; cored, 3s. 6¾d. (CHARLES CLIFFORD LIMITED).

Nickel Silver, etc.—Rolled metal, 3 in. to 9 in. wide × 0.056, 3s. 11¾d. per lb.; round wire, 10g. in coils (10 per cent.), 4s. 4¾d.; special quality turning rod, 10 per cent., ½ in. dia., in straight lengths, 4s. 3¾d. All prices are net.

Other Metals.—Magnesium, ingots, 2s. 2¼d. to 2s. 3d. per lb.; Antimony, English, 99 per cent., £230 0s. 0d. Quicksilver, ex-warehouse, £60 0s. 0d. Nickel, £660 0s. 0d. Aluminium, ingots, £186 0s. 0d.; aluminium bronze (BS1400), AB1, £237 AB2, £245.

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REFRACTORIES

Company News

FRY'S (LONDON), LIMITED, tool manufacturers and wholesalers, of London, S.E.10—Group net profits for the year ended July 31, 1961, are less at £29,950 (£40,281), after tax of £24,350 (£33,157) and the dividend is cut to 17½ (20) per cent., with an unchanged final of 10 per cent.

ROBERT HUDSON, LIMITED, manufacturers of light railway equipment, iron and steel founders, etc., of Leeds—Group profit is down to £201,985 (£312,302) with a parent company loss of £68,709 (£56,626 profit). Net profit contracted to £92,985 (£167,802) after tax of £109,000 (£144,500) and the dividend is reduced to 12½ (15) per cent. with a final dividend of 5⅞ per cent.

STANDARD RANGE & FOUNDRY COMPANY, LIMITED, tool and hardware stockholders, of Watford (Herts)—An extra-ordinary meeting will be held on November 21, 1961, to consider an increase in the authorized ordinary capital to £350,000 by the creation of a further 400,000 ordinary shares of 5s. each and capitalization of £100,000 from reserves to make a free scrip issue.

HELICAL BAR & ENGINEERING COMPANY, LIMITED—Declaring an interim dividend of 6d. per 5s. ordinary share, or 10 per cent., the directors consider that not less than 6d. a share will be recommended as a final. The interim, on capital increased by a two-for-five scrip issue, compares with the previous equivalent of 7.14 per cent. For the year ended January 31, 1961, holders received total dividends equal to 22.14 per cent.

SPENCER (MELKSHAM), LIMITED, manufacturers of elevating, conveying, and conditioning plant, of Melksham (Wilts)—Net profit for the year ended September 26, 1961, increased to £147,340 (£125,428), after tax of £143,280 (£129,730). Dividend is maintained at 15 per cent. and a 50 per cent. scrip issue is proposed. Holders registered on November 17 will be allotted one new 5s. ordinary share for each 10s. held. The existing shares will then be subdivided into 5s. shares.

£662,000 Take-over Bid for Follsain

Vehicle-equipment manufacturers of Lincoln, the Clayton Dewandre Company, Limited, has made an offer to acquire all the issued share capital of Follsain, Limited, manufacturers of special alloys and steel castings, of Lutterworth, near Rugby (Warwicks). For every five Follsain 4s. ordinary shares, holders will be offered one Clayton Dewandre £1 ordinary unit, these terms valuing the Follsain shares at 10s. each against a market price of 9s. and a price of 50s. for Clayton Dewandre. The equity share capital of Follsain is thus given a total value of £662,000.

Included in the terms is an exchange of 40 Follsain 6 per cent. 10s. preference for 21 Clayton Dewandre 6 per cent. £1 preference shares. The board of Follsain recommends the offer and they intend to accept in respect of their own holdings totalling more than 26 per cent. of the ordinary. Mr. H. M. Jones, chairman of Follsain is to be invited to join the board of Clayton Dewandre on the offer becoming unconditional.

INCLUDED IN US ORDERS valued at $60,000,000 (£21,400,000) which were placed with the new Leyland-Standard Triumph group at the London Motor Show, was one for over 350 diesel-engined trucks valued at $3,000,000. The contract was placed by Leyland Motors (U.S.A.) Inc.

Obituary

DR. EDWIN GREGORY

The death occurred at his home in Rotherham on November 7 of Dr. Edwin Gregory, the distinguished metallurgist. He was 67. Dr. Gregory, who was for many years chief metallurgist and a director of Edgar Allen & Company, Limited, Sheffield, was an internationally known authority in his field. His many contributions to technical literature included his first text-book, "Metallurgy," published in 1931 and still a standard work in universities and technical colleges in the UK, the Commonwealth, and the US, and a number of works written in collaboration with Mr. W. W. Stevenson and with Mr. Eric N. Simons.

Dr. Gregory was educated at the old Sheffield Central School and at Sheffield University, where he gained the Associateship in Metallurgy, the Mappin Medal and Premium, and many other awards. The greater part of his career had been spent in the city. After about 12 years with Kayser, Ellison & Company, Limited, he left on account of ill-health in 1920.

The following year he joined the permanent staff of the metallurgical department of Sheffield University. At the end of 1937, wishing to return to production work, Dr. Gregory left the University to become metallurgist at the Park Gate Iron & Steel Company, Limited. In 1943 he was appointed head of the metallic materials section of the Aeronautical Inspection Directorate of the Ministry of Aircraft Production with the rank of assistant director.

Work for Technical Bodies

Dr. Gregory joined Edgar Allen & Company as chief metallurgist in 1944, and was made a director two years later. In April this year, when the board of the company was reorganized, he gave up his executive positions, but remained a non-executive consultative director.

Dr. Gregory belonged to many local and national technical bodies and associations. Among much else, he was a member of the Council of the Royal Institute of Chemistry, a founder Fellow and vice-president of the Institute of Metallurgists, a governor of the National Foundry College, a past-president of the Institution of Engineering Inspection, one of the original members of the British Iron and Steel Research Association Council, and chairman of BISRA Standard Methods of Analysis Committee.

He took an important part in the formation of the British Steel Castings Research Association, and was a member of its Council and finance committee as well as research chairman. He had also been president of Sheffield Metallurgical Association, and was a member of the Court of Governors of Sheffield University and of its engineering and metallurgical advisory committee.

In addition to his own published work, he had acted an associate editor of "Kempe's Engineers' Year Book" since 1937, and during his career made many contributions to the discussion of and presented papers before the Iron and Steel Institute.

After a long illness, Mr. C. LANDALE BENN, chairman and managing director of Charles Benn & Sons, Limited, engineers and boilermakers, Vulcan Foundry, Stourton, Leeds, has died aged 66.

Mr. DAVID BAIN, who has died in Windsor at the age of 80, was with the Lion Foundry Company, Limited, Kirkintilloch, for 60 years and was the firm's representative for more than 50 years in London. He was appointed a director in 1940.

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For Super Duty and Special Conditions of Higher Temperature up to 1800°C. Reducing Atmospheres. Resistance to Slag attack. Resistance to products of combustion. Use SECAR 250 (an iron-free white calcium-aluminate cement).

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Imports and Exports of Iron and Steel in September

The following tables, based on Board of Trade returns, give figures of imports and exports of iron and steel in September this year. Totals for the first nine months of 1960 and 1961 are also included.

Total Exports of Iron and Steel

Destination.	Month ended Sept. 30.	Nine months ended September 30.	
	1961.	1960.	1961.
	Tons.	Tons.	Tons.
Malta	607	4,556	4,072
Sierra Leone	318	4,731	7,502
Ghana	1,316	16,650	12,969
Nigeria	2,919	45,705	53,242
Union of South Africa	1,852	51,019	44,234
South-West Africa	681	5,025	12,032
Rhodesia and Nyasaland	1,655	19,894	23,435
Tanganyika	3,251	11,213	22,775
Kenya	2,542	22,780	30,371
Uganda	58	1,050	1,873
Mauritius	15	4,012	1,461
Bahrein, Qatar, and Trucial States	593	11,026	14,302
Kuwait	413	5,041	17,243
India	11,420	200,679	150,327
Pakistan	3,353	51,816	65,510
Singapore	1,356	14,720	19,102
Malaya	1,389	14,160	20,159
Ceylon	1,823	39,445	29,331
British North Borneo	58	3,366	2,170
Hongkong	7,727	63,876	66,452
Australia	4,852	135,122	97,561
New Zealand	7,107	89,621	173,328
Canada	5,624	165,716	93,130
Jamaica	1,395	17,970	12,437
Trinidad	3,191	30,682	33,591
British Guiana	517	6,886	6,902
Other Commonwealth countries	2,568	20,770	23,307
Eire	5,816	46,285	57,044
Soviet Union	4,889	23,156	28,796
Finland	7,682	34,209	48,773
Sweden	11,015	130,541	123,072
Norway	9,366	84,219	100,095
Denmark	7,872	72,069	78,118
Poland	1,834	8,798	30,729
Western Germany	8,048	107,079	84,089
Eastern Germany	878	16,561	18,335
Netherlands	4,750	90,784	88,860
Belgium	1,329	25,843	24,446
France	836	5,688	9,709
Switzerland	2,105	10,284	17,332
Portugal	4,223	12,292	21,958
Spain	2,054	37,574	18,842
Italy	9,239	32,076	58,004
Austria	601	4,007	4,265
Yugoslavia	1,563	29,076	22,489
Greece	3,517	13,855	28,152
Turkey	129	11,576	11,725
Netherlands Antilles	96	2,781	1,353
Portuguese East Africa	95	3,536	1,901
Egypt	2,638	9,929	24,791
Libya	4,116	30,541	17,574
Sudan	875	7,256	7,675
Israel	1,608	15,155	17,806
Saudi Arabia	39	369	1,031
Iraq	1,221	32,560	26,395
Iran	3,235	48,876	27,316
Burma	1,698	4,801	5,263
Thailand	454	4,968	4,445
Indonesia	223	19,950	2,958
China	141	40,032	10,542
Japan	19,889	54,459	134,386
Philippine Republic	495	6,050	3,935
USA	11,604	164,996	98,113
Cuba	35	5,905	836
Mexico	269	4,917	3,104
Colombia	1,224	6,591	9,373
Venezuela	570	28,438	20,341
Ecuador	–	2,128	2,118
Peru	382	4,928	6,469
Chile	182	3,280	2,532
Brazil	266	22,838	13,387
Uruguay	701	6,677	7,015
Argentina	12,811	65,089	129,159
Other foreign countries	2,730	46,359	51,888
TOTAL	223,943	2,496,912	2,545,357

NEW CONVEYOR COMPANY, LIMITED—Mr. J. D. Dunlop has been appointed managing director.

Total Imports of Iron and Steel

From	Month ended Sept. 30	Nine months ended Sept. 30	
	1961.	1960.	1961.
	Tons.	Tons.	Tons.
Union of South Africa	2,348	23,969	28,408
Rhodesia and Nyasaland	682	5,123	19,076
Canada	4,481	197,875	71,647
Other Commonwealth countries and Eire	749	37,958	34,676
Soviet Union	5,542	27,590	22,624
Sweden	3,346	35,223	36,313
Norway	8,083	119,464	84,706
Poland	179	8,370	831
Western Germany	1,688	108,907	19,826
Netherlands	10,007	153,342	87,312
Belgium	2,280	91,663	26,855
Luxembourg	—	11,763	10,130
France	1,169	52,510	15,027
Italy	37	21,081	503
Austria	90	9,637	4,261
Japan	205	5,317	4,979
USA	1,014	314,733	10,730
Other foreign countries	1,265	122,155	9,968
TOTAL	43,165	1,346,680	488,172
Iron and steel scrap and waste fit only for the recovery of metal	874	195,273	17,768

Exports of Iron and Steel, by Product

Product.	Month ended Sept. 30.	Nine months ended September 30.	
	1961.	1960.	1961.
	Tons.	Tons.	Tons.
Pig-iron	6,563	121,095	87,088
Ferro-columbium (niobium)	13	85	70
Ferro-tungsten	125	743	929
Other ferro-alloys	418	8,222	3,017
Ingots, blooms, billets, slabs, sheet bars (incl. tinplate bars), and similar primary forms	4,982	21,685	83,193
Pieces roughly shaped by forging	107	775	1,547
Iron bars, rods, angles, shapes, and sections	169	1,283	1,636
Steel bars, rods, angles, sections, and shapes	47,448	463,537	507,124
Iron plates and sheets	419	527	795
Universal plates	2,541	14,877	13,134
Steel plate, 3 mm. and under 4.5 mm. thickness	3,793	30,755	31,488
Ditto, 4.5 mm. or more in thickness	25,236	256,301	257,923
Blacksheets and blackplate	30,717	221,801	297,477
Hoop and strip	7,327	76,419	85,712
Tinplate	19,789	378,786	314,854
Decorated tinplate	194	4,515	4,876
Galvanized sheets	4,664	62,356	51,715
Other (incl. tinned sheets, terneplate, and ternesheets)	3,142	19,949	30,823
Railway and tramway construction material	14,946	123,250	153,726
Wire rods of steel (incl. alloy steel)	3,242	41,952	46,366
Wire	7,790	88,497	98,750
Tubes, pipes, and fittings	40,328	559,502	473,114
TOTAL	223,943	2,496,912	2,545,357

MORE THAN 250 EMPLOYEES and friends attended the second annual social and dance of the Codnor Park Works, of the Butterley Company, Limited, held in the Butterley Canteen.

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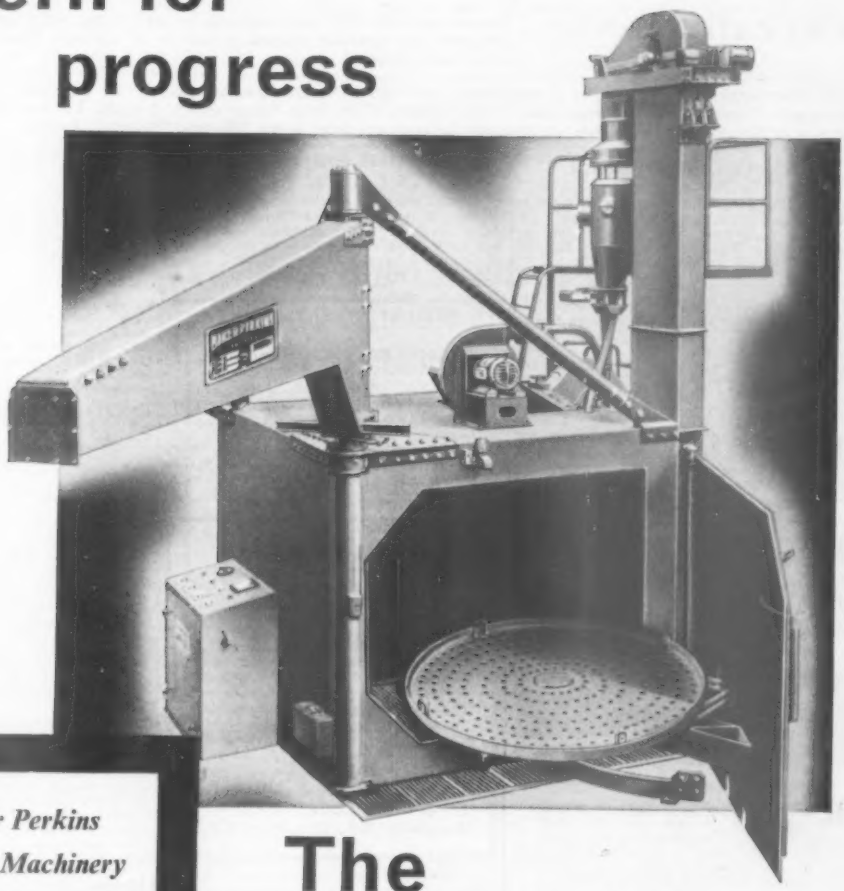

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The swing table 201 H

* Independently mounted circular table
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Write for further details of Baker Perkins Swing Table Shot Blast Machines, to:

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CLASSIFIED ADVERTISEMENTS

PREPAID RATES: **Twenty words for 10/- (minimum charge) and 4d. per word thereafter. Box numbers 2/6 extra per insertion (including postage of replies). Situations wanted 2d. per word throughout.**

Advertisements (accompanied by a remittance) and replies to Box Numbers should be addressed to the Advertisement Manager, Foundry Trade Journal, John Adam House, 17/19, John Adam Street, Adelphi, London, W.C.2. If received by first post Monday advertisements can normally be accommodated in the following Thursday's issue.

SITUATIONS WANTED

WORKS/FOUNDRY MANAGER (42) seeks position. Experienced all aspects non-ferrous, grey iron, jobbing, mechanised. Full control. Box WF166, FOUNDRY TRADE JOURNAL.

FOUNDRY METALLURGIST / ASSISTANT FOUNDRY MANAGER, aged 28, A.M.I.B.F., N.F.C. Diploma, seeks interesting progressive post. Experienced modern foundry methods, technical control and development. Box FM157, FOUNDRY TRADE JOURNAL.

TECHNICAL REPRESENTATIVE seeks position. First class connections with users of non-ferrous grey iron castings. Box TR167, FOUNDRY TRADE JOURNAL.

FOUNDRY EXECUTIVE (34) seeks position in Technical Representation. Sixteen years' extensive foundry experience. Diploma, National Foundry College, H.N.C. Mechanical Engineering, A.M.I.B.F. Midlands preferred. Box FE137, FOUNDRY TRADE JOURNAL.

YOUNG KEEN TECHNICAL REPRESENTATIVE, time served Iron Moulder (meehanite) and Coremaker with excellent technical qualifications including Diploma National Foundry College, seeks change. Similar position or post in foundry. Box YK184, FOUNDRY TRADE JOURNAL.

REPRESENTATIVE with foundry experience wishes to represent a foundry for non-ferrous and cast iron in London and Counties. Good personal connection. Commission and part expenses. Box RE726, FOUNDRY TRADE JOURNAL.

SENIOR TECHNICAL SALES MANAGER/REPRESENTATIVE with life experience and practical knowledge grey ironfounders, desires change. Must be a firm of repute, mechanised, jobbing. Business negotiated at executive level. Box ST185, FOUNDRY TRADE JOURNAL.

FOUNDRY MANAGER (50), A.M.I.B.F., seeks a position, Lancashire and W.R. Yorkshire. Life experience in trade, machine tool castings up to 20 ton, jobbing, repetition, CO_2, ferrous, non-ferrous, practical, technical, commercial. Excellent references and results, hard-working, conscientious. Box FM187, FOUNDRY TRADE JOURNAL.

SENIOR FOUNDRY EXECUTIVE (43) requires managerial position where technical ability, experience and qualifications, in many branches of foundry and engineering practice, may be used to full advantage. Apprenticeship trained, knowledge of design and development of plant, equipment and casting processes, also technical sales. Box SF185, FOUNDRY TRADE JOURNAL.

SITUATIONS WANTED—*contd.*

FOREMAN MOULDER requires position in a good class Jobbing Foundry. Experienced in heavy castings, green and dry sand, weights, quotations, etc. North of England, or Ireland preferred. Box FM170, FOUNDRY TRADE JOURNAL.

SITUATIONS VACANT

THOMAS POTTERTON LIMITED
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REQUIRE

FOUNDRY LABORATORY TECHNICIAN. Men required for control of foundry. Sand cast iron analysis and hot blast cupola work will be on a shift basis—6 a.m. to 2 p.m. and 2 p.m. to 10 p.m.

METALLURGICAL LABORATORY ASSISTANT

required for Metallurgical contract in our Works Foundries. A knowledge of the production of Copper Base Alloys, Metallography and Pyrometry is desirable.

The conditions we offer are in line with the best modern practice and would be coupled with a salary commensurate with experience.

Please write The Personnel Officer,

J. STONE & CO. (PROPELLERS) LTD., Woolwich Rd., Charlton, S.E.7.

FOUNDRY PLANT MANUFACTURERS in Midlands require SENIOR DESIGN ENGINEER with experience of hot and cold blast cupolas, mechanised charging equipment, ladles, etc. Good prospects and working conditions in modern drawing office, pension scheme, canteen. Full details please in confidence to Box FP161, FOUNDRY TRADE JOURNAL.

FOUNDRY MANAGER

H. DOWNS & SONS (Huddersfield) Ltd., invite applications for the position of Foundry Manager for a jobbing grey iron foundry now producing 65 tons of Castings per month.

The Foundry Manager will take full control and responsibility for the production in all aspects.

Knowledge of green sand moulding, coremaking and cupola operation should have been gained at first hand.

Applicant's salary will be £1,200 per annum plus a production bonus varying between £300/£400 per annum depending entirely on applicant's ability to increase output.

Applications will be treated in strict confidence and should be addressed to:

H. DOWNS & SONS (HUDDERSFIELD) LTD., Peacock Works, Leeds Road, Huddersfield.

SITUATIONS VACANT—*contd.*

EXPERIENCED FLOOR MOULDERS wanted. Good wages and bonus paid. Overtime worked. Apply WALTER W. HOSKEN, LTD., 62, Willow Walk, Bermondsey, S.E.1.

WORKS MANAGER required for aluminium and bronze foundry. Midlands area. Good opportunity for man with experience and organising ability. Box WM174, FOUNDRY TRADE JOURNAL.

STEEL SHOP FOREMAN required for Jobbing and Semi-mechanised Steel Foundry in Essex. Applicants must have practical experience in Modern Methods and Electric Arc Furnace practice. House available for successful applicant. Box SS151, FOUNDRY TRADE JOURNAL.

FOUNDRY TECHNICIAN required, age 26-35. Should have basic training and good technical education including laboratory experience. Experience in copper based alloys essential and the ability to undertake investigations and initiate original development work in the foundry a principal requirement. Salary according to qualifications. Write stating age, qualifications and experience to GENERAL MANAGER, c/o Box FT158, FOUNDRY TRADE JOURNAL.

TECHNICAL REPRESENTATIVE required by Foundry Suppliers for South West of England and Wales. Applicants should be between 25 and 35 years of age although younger men may be considered. Must have sound education with practical foundry and core-shop experience. Starting salary £750 p.a. with bonuses and expenses. Car provided. Opportunity of rapid progress. Box TR171, FOUNDRY TRADE JOURNAL.

MASTER PATTERN SHOP, situated large Midlands town, require experienced MAN to take charge of and expand pressure cast pattern plate foundry. Must be capable of training staff and estimating costs. Aluminium sand foundry experience an advantage. The position will be progressive with Pension Scheme and salary commensurate with capabilities. Write giving full details of experience and initial salary required to: Box MP168, FOUNDRY TRADE JOURNAL.

ASSISTANT FOUNDRY SUPERINTENDENT required by one of South Africa's leading Malleable Foundries.

Must have had practical experience in a Malleable Foundry and be able to organise the production of light to medium castings. This foundry is in the process of expanding and can offer good prospects and salary with a five-year contract to the right man.

Please reply stating past experience etc., together with home telephone number, to Box AF169, FOUNDRY TRADE JOURNAL.

Our representative will be in the United Kingdom to interview any interested party on the 18th/20th November, 1961.

SITUATIONS VACANT—*contd.*

FOUNDRY FOREMAN required for Provincial Foundry in Republic of Ireland. Fully experienced in Cupola and Sand Control, Dimensional and Physical Quality Control. General Castings up to 30 cwt., approximately 40 tons week. Apply stating qualifications and experience to Box FF178, FOUNDRY TRADE JOURNAL.

REQUIRED, a first class REPRESENTATIVE to sell Foundry Coke, Pig Iron and other Foundry commodities, also Steel Bars, Sheets, Sections, etc. in South Yorkshire and Midland Counties.
A well-educated man of smart appearance essential, age 30/40 with practical experience and connections a great advantage. Box RA162, FOUNDRY TRADE JOURNAL.

FOUNDRY FOREMAN, aged between 25 and 45 with practical experience and good technical background, required for grey iron foundry in West Riding of Yorkshire using machine and plate moulded methods producing 20 tons per week. Superannuation scheme in operation. Write in first instance stating age, experience and salary required, to Box FF129, FOUNDRY TRADE JOURNAL.

AGENTS

AGENTS. Medium size Non-ferrous Foundry, Manchester Area, wishing to expand, seeks Agent to introduce repetition and loose pattern work, also aluminium gravity diecasting. Capable of competitive prices and efficient deliveries. Box AM172, FOUNDRY TRADE JOURNAL.

SMALL West Midlands Grey Iron Foundry wishing to expand seeks AGENTS to introduce repetition work, commission only basis. Foundry capable of competitive prices and efficient deliveries. Box SW28, FOUNDRY TRADE JOURNAL.

BUSINESS OPPORTUNITIES

ADVERTISER seeks active interest in small Non-ferrous Foundry. London area preferred. Practical man. Box AS152, FOUNDRY TRADE JOURNAL.

NON-FERROUS FOUNDRY, long established with excellent connections in London and southern area. Turnover at present £60,000 p.a. capable of easy expansion. Order book stands at £30,000. Sand castings only. All reasonable propositions considered. Box NF164, FOUNDRY TRADE JOURNAL.

MACHINERY WANTED

WANTED: 30 in. Disc and Bobbin Sanding Machine (or vertical bobbin only). Also Recessor, preferably "Wadkin" "LQ." DALTONS, Canal Street, Nottingham.

TILTING FURNACE, preferably lip axis, oil or gas fired, ¼ ton brass capacity or larger, state make and type. Box TF173, FOUNDRY TRADE JOURNAL.

WANTED: 10 cwt. Skip-type Cupola Charging Machine. Please state price and full particulars. MESSRS. J. C. HULSE & CO., LTD., Hinkshay Foundry, Dawley, Shropshire.

MACHINERY WANTED—*contd.*

WANTED. MORGAN 500-lb. Brass Tilting Furnace and one Shell Closing Machine. Size, State price. Box WM176, FOUNDRY TRADE JOURNAL.

REQUIRED. One Airless Shotblast Barrel or Table, must be complete and in good working condition. Give full specification to Box RO180, FOUNDRY TRADE JOURNAL.

WANTED. Luke & Spencer 20 in. or 24 in. Double-ended Grinding Machine with dust extractor attachment. Or similar Machine. CAMBRIAN CASTINGS LIMITED, Hirwaun Industrial Estate, Rhigos, Aberdare, Glam.

WANTED. SAND SLINGER, 3 ft. or 5 ft. radius, suitable for 400 V. 50 C. 3 PH. Stating age, condition, where lying and approximate price. Box WS183, FOUNDRY TRADE JOURNAL.

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Surplus Foundry Plant and Forging Equipment
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CUPOLA. 42 in. dia., 3½ ton per hour. Complete with fan and wet spark arrestor. £150. Box CF181, FOUNDRY TRADE JOURNAL.

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MACHINERY FOR SALE—*contd.*

"WADKIN" "WX" Universal Pattern Miller with 6 spindle speeds, new 1952, perfect order. DALTONS, Canal Street, Nottingham.

TWO B.M.M. H.P.L.1 MOULDING MACHINES, may be inspected working in South East England. £200 each. Box TB179, FOUNDRY TRADE JOURNAL.

TWO "COLEMAN" CN type Moulding Machines for sale, in as-new condition. Reasonable price. Box TC165, FOUNDRY TRADE JOURNAL.

FOR SALE. One second-hand 5 ft. 6 in. dia. Mill with 2 ft. 7 in. dia. × 12 in. wide cast iron rollers, under geared. £75 ex-Works. Electric motor drive can be supplied if required. PRATT & GEORGE LTD., Lewis Street Works, Pentre, Rhondda, Glam. Tel. Pentre 2254.

100 LENGTHS Gravity Roller Conveyor, 14 in. wide by 2½ in. dia. rollers at 6 in. pitch, set in 2 in. by 1½ in. by ¼ in. angle frames. 8 ft. lengths, 50 lb. per roller. Price £4 per length ex-works. JAS. EVANS & CO. LTD., Britannia Works, Cross Street, Salford 3, Lancs. Tel. Blackfriars 2297.

FOR SALE. One 2 ton per hour cupola, complete with blower fan and blast, main inclined skip type semi automatic charger. Including one complete set of firebrick lining and all electric equipment for 415 volts, 3 phase, 50 cycles supply. Drop bottom 4 tuyeres. Box FS160, FOUNDRY TRADE JOURNAL.

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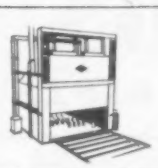
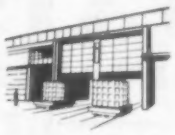

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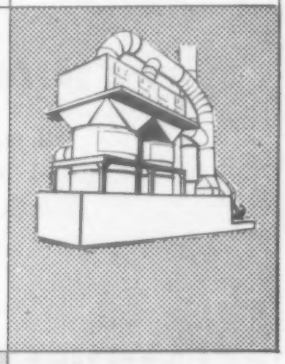

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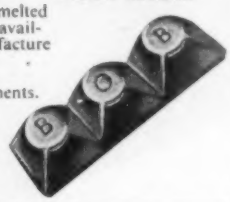

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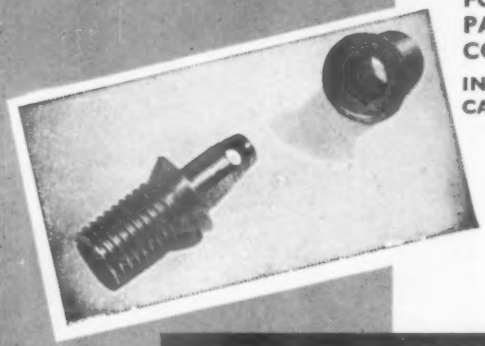

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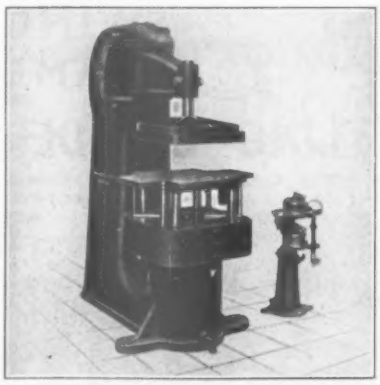

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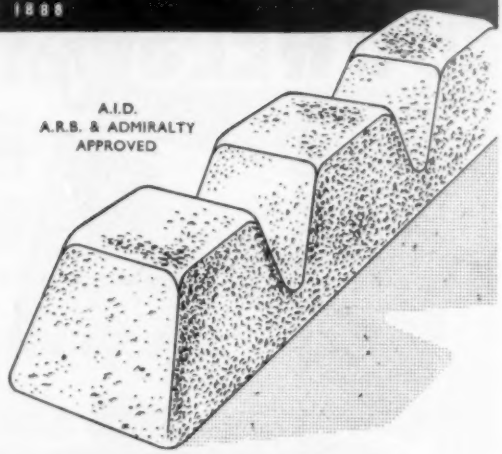

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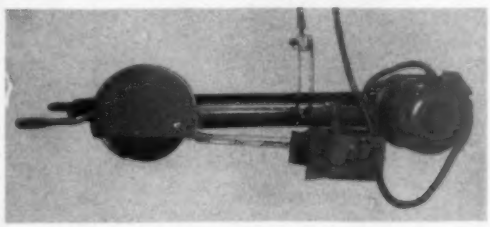

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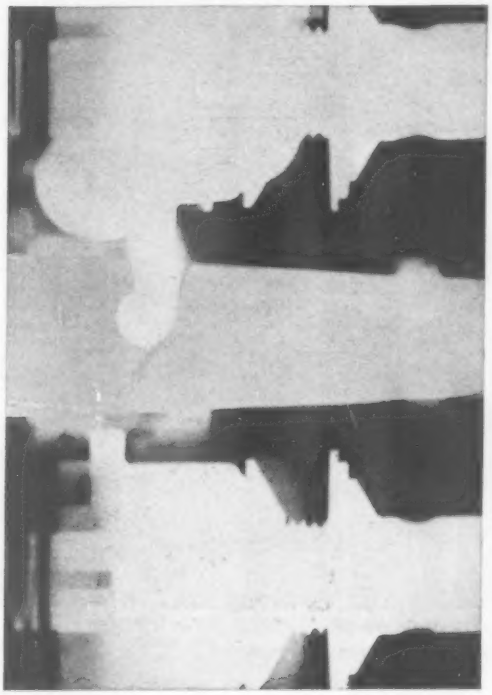

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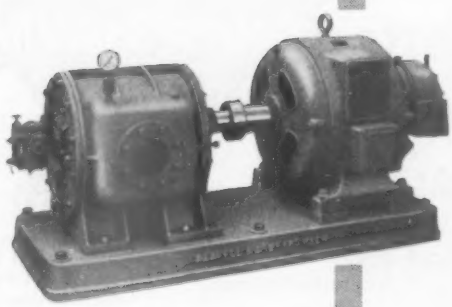

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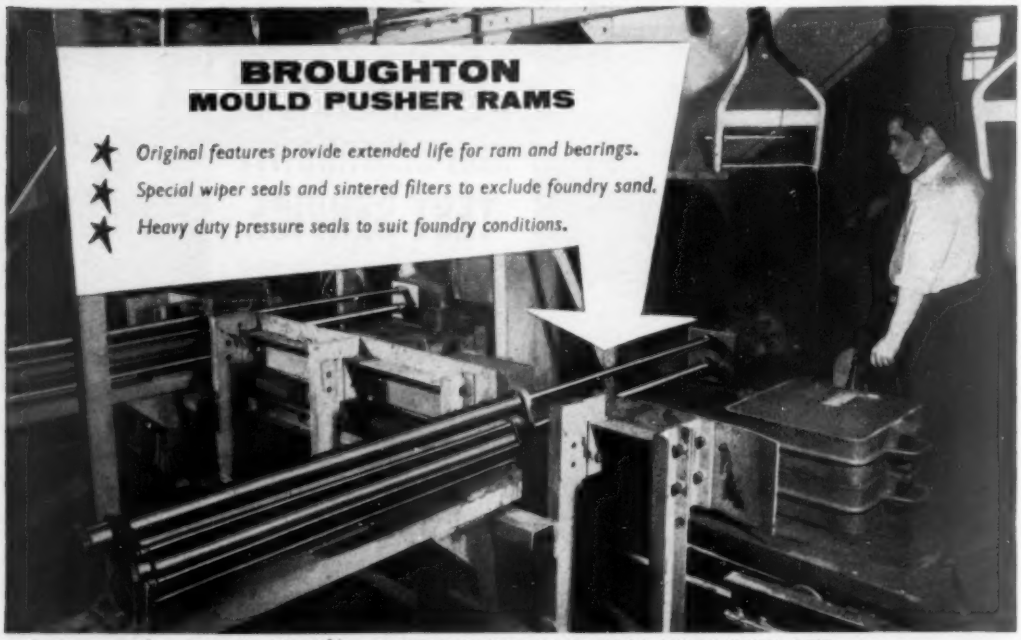
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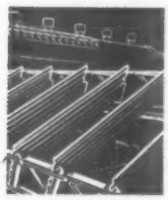

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